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TRAINING IN ENGINEERING PSYCHOLOGY

REPORT OF A COMMITTEE OF THE SOCIETY OF ENGINEERING PSYCHOLOGISTS¹

THIS report considers the nature of the scientific and professional work of psychologists and related specialists who are active in the broad fields of human factors engineering, analyzes the qualifications required for such work, and outlines training programs which should provide an adequate preparation for specialization in this area.

Engineering psychology is rapidly becoming a well established and widely accepted specialty. The growth of the field has been documented by recent surveys of human factors engineering personnel in aviation and associated industries (see Kraft, 1958), and by surveys of human factors professional personnel in nongovernment industrial organizations by the System Development Corporation in 1959 and in 1960 (see Table 1).

The scope and objectives of engineering psychology have been covered in several recent articles (see Chapanis, 1960; Christensen, 1958; Taylor, 1957, 1960; Wood, 1958) as well as in numerous older ones (Fitts, 1947; Helson, 1949; Kappauf, 1947; Stevens, 1946). Two further articles on this topic, by Paul M. Fitts and by Franklin V. Taylor, will appear in Volume V of *Psychology: A Study of a Science* (Koch, in press). Therefore, a detailed review of the nature of engineering psychology will not be included here. One important trend should be noted, however: it is that increased emphasis is now being given to man-machine system problems, in contrast to earlier emphasis on problems related to the design of system components (specific displays, controls, etc.). As a result, an increasing proportion of psychologists employed in the human factors engineering field are now working on system design problems or in the system management area, and system considerations should probably receive greater emphasis than is given in currently available textbooks in the field (see Chapanis, Garner, & Morgan, 1949; McCormick, 1957).

In the present report the terms "human factors in engineering" or "human factors engineering" will

be employed when it is desired to refer to the area which includes contributions from all of the scientific and professional specialties represented in Table 1. The term "engineering psychology" will be used to refer more specifically to the contributions of psychology to human factors engineering. Similarly, the term "human factors specialist" will be used when it is desired to include all the professional and scientific workers in this field, whereas the term "engineering psychologist" will be used only when the individual in question has a degree in psychology. A person whose training and ex-

TABLE 1
SUMMARY OF ACADEMIC FIELDS OF STUDY OF HUMAN
FACTORS PROFESSIONAL PERSONNEL BY
LEVEL OF HIGHEST DEGREE

Field	Doctor's	Master's	Bachelor's
Psychology	375	240	130
Sociology & Anthropology	30	31	34
Engineering	3	21	82
Physics	7	3	14
Mathematics & Statistics	3	5	7
Business Administration & Economics	—	5	34
Education	7	8	13
Medicine	7	—	—
Biology	1	1	3
Physiology	5	3	1
Miscellaneous Arts	5	12	12
Miscellaneous Social Sciences	5	8	17
Miscellaneous Physical & Biological Sciences	4	6	15
Others	—	2	11
Total (1170)	452	345	373

Note.—From a 1960 national salary survey conducted by the System Development Corporation.

perience would permit him to be certified as an engineer, and who also has an advanced degree in psychology, could be called either a human factors specialist, a human factors engineer, or an engineering psychologist. A person without an engineering degree ordinarily would not be called a human factors engineer.

¹ Assistance of the Engineering Psychology Branch, Office of Naval Research, in support of the work of the committee which prepared this report is gratefully acknowledged.

ADEQUACY OF PRESENT TRAINING PROGRAMS

It is the consensus of engineering psychologists now active in the field that few recent graduates are as well trained as they should or could be, for either scientific or professional work in support of human factors engineering. On the one hand, many engineers who are now assigned to human factors work have had little or no formal training in behavioral science. On the other hand, many psychologists, who have accepted employment in the field of human factors engineering, find that their formal scientific training has not prepared them for work that requires an understanding of systems, the bringing of psychological theory and concepts to bear on equipment design problems, the planning and conduct of research that will contribute ultimately to the solution of human factors problems in system design, or collaboration with engineers. Indicative of the inadequacy of training programs is the fact that only a few colleges and universities now offer any kind of special training programs, either for engineers or for psychologists, in this area. The improvement of instructional programs in engineering psychology, including theory level and professional courses, should be a matter of general concern to psychologists.

Acting as a committee of the Society of Engineering Psychologists, the authors of the present report have concerned themselves primarily with the scientific and professional training of psychologists. It is obvious, however, that much of the basic knowledge or theory required for the solution of human factor problems in engineering originates within the domain of scientific psychology, even though it may be applied by nonpsychologists. Hence we felt that it was appropriate for us to consider how, to what extent, and at what point in their training this knowledge might be imparted to engineering students. Therefore, we have also included in the present report a discussion of the types of courses which psychologists and psychology departments might offer for students in other areas, such as engineering, who plan to work in the human factors area.

TECHNICAL AND PROFESSIONAL ACTIVITIES OF ENGINEERING PSYCHOLOGISTS

The professional and technical activities of engineering psychologists can be considered in terms of where they work, with whom they work, the types

of problems they are asked to solve, and the stages in the life cycle of systems during which their contributions are needed.

Typical Professional Activities

Most engineering psychologists are now employed in industry, in private consulting and research organizations, or in government laboratories. Very few teach. For example, only about 15% of the members of the Society of Engineering Psychologists are associated with any college or university. The majority usually find themselves associated rather closely with individuals trained in a variety of other disciplines. Sometimes their immediate supervisor, and often the individual to whom the head of their group reports, is an engineer with primary interest in system design and development.

By far the most frequent type of problem encountered by engineering psychologists has to do with the design of man-machine systems and system components. Communication systems, data processing systems, command and control systems, transportation systems, surveillance systems, logistic systems, production systems, and space vehicles are typical of the man-machine systems with which they are asked to work. In order to find effective solutions to the problems encountered in designing such systems the engineering psychologist often finds it necessary to refer to the content of general experimental psychology (sensory processes, perception, human learning, reasoning, motivation, decision making, skill, effects of stress, etc.). He may also find himself confronted with questions in social psychology (small group performance), in educational psychology (training problems), or in industrial psychology (personnel selection and utilization, qualitative personnel requirements); and he may be asked to integrate work on personnel, training, equipment design, and system operation. Relatively early in his professional career he may also be asked to assume system management functions.

Current reviews of the literature in engineering psychology by Fitts in Volume 9 and by Melton and Briggs in Volume 11 of the *Annual Reviews of Psychology* are indicative of the great variety of topics of interest for this specialty.

Contributions to Man-Machine Systems

Another avenue to an understanding of training requirements in engineering psychology is through consideration of the time schedule for psychological

contributions to man-machine systems, in terms of the life cycle of a typical system.

Advanced design. The first step in the creation of a new system often is a study program which considers the feasibility of alternative approaches to the solution of anticipated or existing requirements. Man's overall role in the anticipated system is usually considered at this stage; functions are allocated tentatively to men and to machines based on knowledge of human capabilities and limitations plus estimates of future machine capabilities. Manning requirements are estimated. Training and training equipment needs are projected. Sociological impacts of the system should also be studied during this phase, although they seldom are. Engineering psychologists may be responsible for or participate actively in many aspects of such advanced design studies.

Project engineering. In the next stage in system development preliminary ideas are worked out in greater detail. Simulation facilities may be used to determine how to arrange workplaces, how to counteract unusual environmental stresses, and how to solve specific display and control design problems. Operational procedures are outlined and training equipment designed and produced. Reliability, maintainability, logistic support, and related operational aspects are considered. The result of such efforts is the physical realization of a prototype of a specific system or component. Engineering psychologists often contribute directly to this phase but ultimate design responsibility ordinarily rests with an engineer.

Testing. Operational suitability tests and evaluations are conducted on prototype items and systems and on production items and systems after they are placed in operation. Human factor testing is increasing in importance and is rapidly becoming an important part of overall suitability testing programs. Tests may employ computer simulation, mockups, field tests (flight tests, etc.), or actual employment by test personnel or ultimate user. Engineering psychologists often have major responsibility for such test programs, making use of their training in experimental methodology.

System growth and modification during operational use. Some man-machine systems have a life span of many years, during which time changes may occur in operational procedures and repeated engineering modifications may take place. During this phase the role of the engineering psychologists

often becomes less important than that of the personnel and training specialist.

Typical Research Activities

Research activities of engineering psychologists may arise in connection with any of the work described in the preceding section, or may not relate directly to any particular system. It often is difficult to make a distinction between research that is related to the problems of particular systems, and research of a more general nature. It is also difficult to estimate the amount of time engineering psychologists spend in research per se, as contrasted with other activities. Needless to say, it also sometimes happens that the research of a scientist who is himself not interested in engineering psychology may make an important contribution to the area. In spite of this inability to define precisely the research boundaries of engineering psychology, it is the consensus that research competence is one of the most desirable characteristics of an engineering psychologist and that the future of this area rests in large measure on the quality of the research done in support of it.

TO WHOM SHOULD THE TRAINING BE OFFERED?

One of the issues of importance for the future of engineering psychology is whether the gap between the PhD level, human factors scientist and the design engineer should be filled primarily by engineering school graduates who have had special training (to the BS and MS levels) in psychology and related behavioral science; by graduates of liberal arts colleges who have majored in psychology and taken related work in mathematics, science, and engineering; or by men with both types of training. Training programs to the BS and MS levels could be established either in engineering or in liberal arts colleges. Preference of one of these over the other involves several considerations.

Training programs may differ considerably depending on whether they are carried out in a large university with a strong psychology department, or in a technical institute where there is no such department. It is the considered opinion of the committee that, at the initial level of training (the BA or BS degree), the arts college graduate will in the long run often be handicapped, careerwise, in competition with the certified engineer, even though both men have had equivalent training in psychol-

ogy. Added to this important consideration is the widely held opinion, among arts college faculties, that professional training should be delayed until the graduate years. Thus any move to offer technical and professional training at the BS level in the arts college program might encounter considerable opposition. There seems to be some justification, therefore, for recommending that human factors training to the BS level be offered for engineering college students rather than for students who are enrolled in colleges of arts and science. The psychology courses offered to engineering students can, of course, be taught by members of the faculties of arts colleges just as are many courses in mathematics and science.

At the level of the MS or MA degree it is the consensus of the committee that an arts college background, with its greater opportunity for emphasis on the sciences and humanities, would not be a handicap, and might often be an advantage, as compared to a background in engineering. Such an arts college background should include courses in mathematics and science and a few selected engineering courses.

At the PhD level there is clearly room for human factor specialists with several types of degrees: the interdepartmental degree and that taken within a department of psychology, a department of physiology, etc. Interdisciplinary programs are feasible in areas combining psychology, physiology, medicine, engineering science, communication science, management science, etc.

It is the opinion of the committee that much is to be said in favor of the so-called "two-three" program which is now in effect in some engineering colleges. Such a program usually calls for 2 years of general education, followed by 3 years of specialization. The best students in this program, the ones who might be encouraged to go on for the PhD degree, often do a thesis project in their fifth year and are awarded the BS and MS degrees concurrently. A program of this sort offers an excellent opportunity for the introduction of psychological training for engineers.

PROGRAMS OF STUDY

BS Level

The committee does not presume to understand the many problems confronting engineering curriculum committees and accrediting groups. We do recognize that many problems would have to be

solved before engineering students could be offered the opportunity to major in engineering psychology. We offer our ideas, therefore, only as a guide to individual psychologists or departments that may be asked for suggestions regarding the training of engineers either in large universities or in engineering technical schools which do not have departments of psychology.

General psychology for engineers vs. engineering psychology. Many technical schools recognize the need for broad training of their students in the humanities and in behavioral science (see previous surveys of engineering schools made by George Miller, 1952, and by Loveland & Payne, 1955, both under the sponsorship of the Subcommittee on Training, APA Committee on Psychology in Other Professional Schools). We use the term "general psychology for engineers" to identify courses offered to satisfy this need. These might be general survey courses in psychology, presented in a special context and with illustrations that would interest engineers. Gilmer and Karn (1954) have discussed such a course, and Gagne and Fleishman (1959) have written a suitable textbook.

The present report, however, deals not with general psychology for engineers but with the problem of preparing engineers for technical work as human factors specialists. With the continued rapid growth of human factors engineering the demand for engineers with technical training in this area will undoubtedly increase (see Peters & Seminara, 1959, and Warren, 1959, for previous discussions of training needs).

Undergraduate courses for engineering students. It is presumed that the engineering student who specializes in human factors at the undergraduate level will also specialize in some traditional area of engineering (see, for example, the Johns Hopkins University program in Industrial Engineering with Human Engineering Emphasis). Such students might major in some traditional area of engineering and minor (or take a joint major) in psychology. Such a program might require as much as $4\frac{1}{2}$ or 5 years.

Because of differences among schools, and the tentative nature of our suggestion regarding a 5-year BS-MS program, it is deemed unwise to propose a detailed curriculum for the undergraduate years. However, it is the consensus that the student should take from 1 to $1\frac{1}{2}$ years (30-45 semester hours) of psychology. This work should

cover such content areas as sensory and perceptual processes, learning, individual differences and aptitude assessment techniques, human motivation, physiological psychology, laboratory techniques in experimental psychology, and two or more courses emphasizing statistics and research methodology.

Most of the above courses are already available in psychology department offerings. In addition, three special courses are recommended which might have to be added to the more traditional offerings. First, a one- or two-semester course introductory to engineering psychology is recommended, with a laboratory and field projects. Second, either a new theory level course in human performance should be offered, or else man's performance capacities and limitations should be emphasized in courses on learning, sensory processes, motivation, measurement, etc. Third, a course should be introduced to provide an orientation to the professional problems encountered in planning, budgeting, and managing human factors programs; to the types of consulting and applied work done by human factor specialists; and to the special skills needed in problem oriented research, such as those covered in Chapanis' 1959 book on *Research Techniques in Human Engineering*.

Undergraduate courses for arts college students who are planning to go on to graduate study. An undergraduate concentration program in engineering psychology for liberal arts students, as preparation for further graduate work, would correspond to the concentration program recommended for engineering students. It would place less emphasis on professional courses, however. The arts college student should also be advised to take mathematics and science prerequisites similar to those of the engineer.

Undergraduate courses outside of psychology should ordinarily include 15 to 20 semester hours in mathematics (calculus, matrix and set theory, information theory, etc.). One year of physics and one year of physiology are desirable. A few courses in engineering might be elected from topics such as circuit theory, computer theory, production methods, operations research methods, motion and time study, machine design, engineering economics, and labor relations. Other desirable elective courses would include logic and the philosophy of science, business management, industrial sociology, experimental phonetics, engineering drawing, technical writing, and public speaking.

Graduate Training

Master's degree. A master's degree program is recommended for three types of students. First, as is done in some engineering departments today, outstanding students in a 5-year undergraduate program could be identified and, provided they completed a thesis and did qualitatively superior work, be granted an MS degree at the time of conferral of the BS degree. In this instance the MS would be an honors degree and would identify those students who could be encouraged to go on for the PhD degree.

Second, outstanding graduates in such fields as mathematics, physics, biophysics, and engineering who wished to develop basic competence in engineering psychology could be advised to take an MA program in psychology.

At the present time many engineers and physical scientists now employed in industry or in research have become interested in human factors engineering, but lack formal and specialized training, and would like to go back to school for additional training in psychology. Efforts should be made to encourage the most able of these men to undertake at least a year of study in engineering psychology (an MA degree).

If the undergraduate background of such engineers is deficient in psychology it will, of course, be necessary for them to make up this deficiency. However, in most instances this should only extend the time required to earn the MA degree by about one extra summer, since the mathematical and scientific backgrounds of such students would be an excellent preparation for the kinds of graduate psychology courses they would be taking.

Third, an MA degree with specialization in engineering psychology should be open to liberal arts college graduates having a proper background.

PhD degree. The committee feels that the PhD degree with specialization in engineering psychology should signify broad competence in experimental methodology, expertness in one or more of the process areas of psychology (vision, audition, perceptual and motor skills, decision making, information handling, small group performance, learning, etc.), and major accomplishments in some area of psychological research. Such competences would mark the holder of the degree as an expert capable of advising on difficult technical problems and of planning, conducting, and supervising research programs.

The technical background of the PhD level scientist should be equivalent to that of the BS student. The former should, of course, possess theoretical knowledge and basic understanding needed to develop new techniques and to supervise and evaluate technical work. Thus, the PhD candidate should be expected to demonstrate ability to analyze data, to use computers, to set up apparatus, to collect data, etc.; and if he has not acquired these skills as an undergraduate he should be expected to do so at the graduate level. More important, he should know statistical theory, measurement theory, learning theory, perceptual theory, general performance theory, etc. This means, in general, that his graduate work should usually be concentrated in experimental psychology with specialization in one or more content areas.

Graduate courses. We recommend a grouping of topics in psychology for graduate students under the heading of principles of human performance or human performance theory. This area is identified by an interest in task taxonomy and the study of task variables; in the specification of levels of human performance in universally meaningful, quantitative units (centimeters, grams, bits, seconds, etc.); and in topics such as information handling, time sharing, human reliability, cybernetics, decision making, stress and fatigue effects, stimulus-response compatibility effects, the final asymptote of training, information coding, feedback systems, human skill, alertness and fatigue, and human vs. machine capabilities.

The graduate student who elects to major in engineering psychology should be advised to take extensive course sequences outside of psychology, such as in mathematics, biophysics, physiology, or one of the engineering specialties. An undergraduate background such as that outlined in the preceding section would make it relatively easy for him to do so, since he would probably have the needed prerequisites for advanced work in these outside areas.

The topic chosen for the PhD thesis should be some problem or topic of relevance for human performance theory.

PROFESSIONAL EXPERIENCE

The PhD program should include supervised work experience. Whereas the person with a BS degree should expect to continue to work under supervision and to learn on the job, the PhD level scientist should be able to survey and determine research

needs, to plan problem oriented research programs, and to supervise the work of other personnel. In order to do this he must have had some experience in dealing with the kinds of problems encountered in industrial, military, and nonacademic situations.

In particular the professional engineering psychologist should be able to accept real-life problems (as perceived by engineers, designers, architects, managers, supervisors, commanding officers, and clients), to analyze and define these problems, and to employ existing knowledge or appropriate research methodology in solving them. Preferably, of course, he should also seek the ultimate goal of a basic understanding of these real-life problems. Carefully planned work experience under supervision of senior engineering psychologists should contribute to this training objective.

TRAINING OF INSTRUCTORS IN ENGINEERING PSYCHOLOGY

The shortage of well-trained engineering psychologists extends to college teachers. As mentioned earlier, over 85% of the PhD level psychologists who have entered this field are now on the staffs of government laboratories or industrial groups. Few are to be found in the universities.

There are difficulties in recruiting men with the training and the experience required to teach specialized courses in the areas of engineering psychology. First, university salary levels are lower than those to which most people with professional experience in engineering psychology have become accustomed. Second, the scientific contributions of many of the men who have been working in industry, as indicated by their records of research and journal publications, do not impress faculty selection committees.

The most feasible way to increase the number of instructors qualified to teach specialized courses and to direct thesis research in engineering psychology appears to be to induce younger faculty members in experimental, physiological, industrial, measurement, and related areas of psychology to seek temporary appointments with some established group in the engineering psychology field, such as one of the government research laboratories or one of the human factor consulting firms throughout the country, in order to gain firsthand experience. Such work experience might be for as short a time as a summer, although preferably it should be for a year. As an alternative, direct experience with the

professional aspects of engineering psychology may in some cases be achieved through association with appropriate research projects in universities.

Special summer workshops and intensive post-graduate short courses for prospective teachers of engineering psychology are another alternative, but the financing of such workshops poses a further problem.

INDUSTRY'S CONTRIBUTION TO TRAINING IN ENGINEERING PSYCHOLOGY

Leaders in industry can do at least three things to help bring about some of the goals recommended in this report.

First, industrial leaders can be more vocal in making their needs for well-trained specialists in human factors known to university faculties. For example, the demands for human factor specialists trained at the BA level are not generally known either to students or to faculties.

Second, industrial leaders can offer temporary employment of the kind that will provide internship experiences for students who are working for degrees in engineering psychology, and for university staff members who would like to prepare to teach courses in this area.

Third, industrial organizations can contribute additional fellowships and research grants for students in engineering psychology. These could include undergraduate scholarships, graduate fellowships, and grants to mature engineers who wish to return to school for a year or more of specialized study in engineering psychology. Grants to universities in direct support of thesis and other research in the areas of engineering psychology would also provide needed support to the field and contribute to the improvement in quality of training and research.

DIVISION 21 COMMITTEE ON TRAINING IN ENGINEERING PSYCHOLOGY

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LENGTH OF GRADUATE TRAINING FOR EXPERIMENTAL AND CLINICAL PSYCHOLOGISTS

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SEVERAL studies have indicated that experimental and clinical psychologists appear quite dissimilar in many regards. As might be expected, experimental and clinical psychologists display noticeably different interest patterns (Baas, 1950; Clark, 1957), but it is rather surprising to note that differences have also been found in such factors as the size of the city where they are born (Carpenter, 1954) and in their religious backgrounds (Clark, 1957). In an effort to discover what other factors might differentiate experimental from clinical psychologists, a comparison between these two groups on all items of information available from the 1959 APA *Directory* listings was made.¹ For the purpose of this study, an experimental psychologist is defined as a person belonging to Division 3 and a clinical psychologist as a person belonging to Division 12. This obviously represents a very narrow and restricted definition of occupational classification since Kelly (1960) states: "A careful study of the 1960 *Directory* indicates that only about one out of three APA members now functioning as clinicians belong to Division 12." However it was felt that since over 3,000 persons were included in this survey, any differences found would allow some meaningful generalizations to be drawn.

Differences were found in such areas as frequency of membership in other APA divisions and in geographical regions where they are most frequently employed (proportionally more clinical psychologists are found in California and New York), but it was felt that the most interesting difference which emerged from this analysis concerned the length of time taken by experimental and clinical psychologists to complete their graduate training. These results are shown in Table 1.

Since information provided in the *Directory* listings is restricted to a notation showing only the

dates that the various degrees were awarded, the figures shown in Table 1 overestimate the period of actual graduate training since a person may not have immediately or continuously enrolled in a graduate program after completing his BA degree.² The figures would, however, accurately reflect how long a period of time had elapsed from the awarding of the BA degree until the person finally received an advanced graduate degree.

As can be seen in Table 1, it takes the average experimental psychologist slightly over 2 years to receive the MA degree after he receives the BA, but over 3.25 years are spent by the average clinical psychologist. This finding was rather unexpected because traditionally the MA is considered to be a nonspecialized degree and course requirements at this level are not highly differentiated for students majoring in different areas. It also takes the average clinical psychologist much longer to progress from the MA to the PhD degree. This is to be expected because of the additional requirement that a minimum of one year's internship be served by the prospective doctoral student in clinical. The difference in time involves much more than a year, however, as the average experimental psychologist moves from the MA to PhD degree in about 3.5 years while the clinical psychologist takes over 6 years to accomplish this same objective.

One method of arriving at a figure to represent the average period of time elapsing between receiving the BA until receiving the PhD degree would be to simply add the average figures from the BA to MA and the MA to PhD columns. However this figure representing time to secure the PhD would include data from many persons who never received a doctorate degree since, at least for clinical members, over 22% only possess the MA degree. It may be that the academic motivation of such persons would differ from that of persons who went on to receive the doctorate. Therefore the

¹ Grateful acknowledgment is extended to members of the senior author's 1959 class in Introduction to Clinical Psychology at the University of Denver for their assistance in data tabulation.

² The BA category also includes the BS degree; the MA category includes such degrees as MS, MEd, MSW; the PhD degree includes EdD and ScD degrees.

TABLE 1

LENGTH OF TIME TO RECEIVE GRADUATE DEGREES FOR PERSONS BELONGING TO DIVISION 3 AND DIVISION 12

Division	N	% Female	BA to MA		MA to PhD		% MA Only	BA to MA to PhD		BA to PhD	
			N	Years	N	Years		N	Years	N	Years
Experimental Fellow	333	7.6	257	2.1	256	3.5	0.3	256	5.4	55	4.9
	437	10.6	353	2.2	334	3.7	4.6	334	6.0	56	6.3
Clinical Fellow	724	24.8	564	3.2	560	6.1	0.6	560	8.8	92	7.1
	1545	25.3	1208	3.5	892	6.2	22.1	892	9.3	220	7.2

Note.—Figures across columns do not add to total *N* because of incomplete *Directory* listings on degrees obtained, but total *N* represents persons examined and tallied for sex classification.

figures shown in the BA to MA to PhD column were computed separately for *only* those individuals who were listed as possessing a PhD degree. The figures in this column reveal that the total period of time beyond undergraduate school spent in securing the PhD degree is approximately 5.75 years for the experimental psychologist and slightly over 9 years for the clinical psychologist.

Quite a few persons who were listed as possessing the PhD degree did not list the date when they secured an MA degree. It was assumed that these persons had received their training in the type of program that leads directly from a BA status to the PhD, without pausing to secure an MA degree en route. The figures pertaining to length of graduate training for these persons is shown in the BA to PhD column. This type of program does not greatly shorten the length of time spent by experimental students in doctoral training, as the interval involved is approximately 5.5 years in comparison to approximately 5.75 years for programs where the MA is awarded. For clinical students, however, the story is quite different. It takes over 9 years to receive the doctorate in programs where the MA is secured en route, but only slightly over 7 years in programs where the MA is not awarded.

If the preceding figures for these two types of doctoral programs are combined and averaged, they show that it takes slightly less than 5.75 years for the PhD experimental psychologist to complete his graduate training while it takes slightly over 8.75 years for the PhD clinical psychologist to accomplish this same feat. Why should this be? Of course, clinical internship accounts for one year, but why is there still a 2-year difference remaining?

Some people might offer the hypothesis that the

intellectual level of the clinical student is lower than that of the experimentalist, although proof in support of this notion is not likely to be found. Others might point to the more numerous temptations that the clinical student receives to engage in part-time or even full-time employment while still enrolled in graduate school. Another explanatory possibility along the same lines might be found in the fact that a greater proportion of women are associated with the clinical area and they might more frequently interrupt their graduate careers to pursue marital or motherhood responsibilities. A check on this possibility revealed that the average period of time to receive a PhD is actually over a year longer for women, but there still remains a difference of approximately 1.5 years (excluding internship) between the length of graduate training for male PhD experimental and clinical psychologists. Some other individuals might feel that the explanation is to be found in the content of the graduate program itself, since the clinical student is required to complete a core program of basically experimental subject matter and then go on to courses specializing in diagnostic testing and psychotherapy, while the additional courses taken by his experimental colleagues are very closely related in content and emphasis to those already covered in the core program. Another program consideration might be that it is comparatively more difficult to secure subjects for clinical dissertations since patient populations are more frequently required for the latter.

No attempt has been made to apply tests of statistical significance to the findings of this study since their importance would not reside in the ability to reject some null hypothesis but rather in what

they might contribute to any consideration of the goals, format, and time factors involved in different graduate programs. It is also hoped that the findings pertaining to the extensive length of graduate training for doctoral clinical psychologists, composed as it is of a combination of academic course work plus supervised work experience, may prove to be of some value to persons involved in public relations or informative capacities to related mental health professions.

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FACULTY JUDGMENTS OF GRADUATE SUCCESS:

A FACTORIAL STUDY

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STUDIES on predictors of graduate success report conflicting results. Such predictors as the Miller Analogies Test (MAT), the IER Intelligence Scale (CAVD), and tests of mathematical ability were found to correlate with faculty judgments of success from $-.02$ (Hyman, 1957) to $.56$ (Cureton, Cureton, & Bishop, 1949). It has been pointed out (Fricke, 1956; Platz, McClintock, & Katz, 1959) that some of the low correlation coefficients obtained may be the result of using the predictor measures for screening applicants, insofar as the discriminatory power of the test is limited by reducing the range, through selection, to include only the upper scores of the distribution. This does not explain, however, the wide range of coefficients obtained.

Every study reviewed defines the criterion measure by the instructions given to the raters; the definitions vary from study to study: "potential professional contribution" and "potential scientific contribution" (Platz et al., 1959); "research competence" (Hyman, 1957); "intellectual competence," "research capacity," and "administrative, clinical, or service competence" (Watters & Paterson, 1953); "overall abilities as graduate students" and "suitable candidate for the Master's [and the Doctor's] degree" (Cureton et al., 1949). No further rationale is given for the selection of the particular definitions, nor is their adequacy discussed. It is the purpose of the study to construct a more comprehensive and more rigorously defined criterion, and to study the interrelationships of its various elements.

PROCEDURE AND RESULTS

Twelve members of the faculty of the Department of Psychology and Psychiatry at Catholic University of America were consulted on possible dimensions on which students could be judged. The following scales were devised to include all suggested dimensions (ratings 1 to 7 on each):

1. *Interpersonal Relations*: ability to relate effectively to others of higher, equal, or subordinate status in a variety of situations

2. *Effective Energy*: ambition to succeed, combined with drive directed efficiently

3. *Emotional Stability*: ability to cope with difficulties in a mature way

4. *Professional Identification*: affiliation with the profession, regard for it, and desire to advance it; good professional ethics

5. *Written Communication*: ability to communicate worthwhile ideas clearly

6. *Research Ability*: ability and willingness to be original and creative in development of ideas; capacity to contribute new knowledge by scientific study

7. *Critical Scholarship*: ability to appraise pertinent evidence critically and to use it in the perspective of relevant scholarship

8. *Over-all Judgment*: From your entire knowledge of the student, what is your judgment of him as a doctoral candidate?

All doctoral candidates in the Department of Psychology and Psychiatry at the Catholic University of America, who had been in graduate study one full academic year or longer ($N = 61$), were rated on these scales by the faculty. The ratings of three faculty members indicating the highest degree of acquaintance with the student were recorded for each subject. Estimates of interrater reliability were obtained for each scale by a formula (Ebel, 1951) for estimating reliability of mean ratings. For further computation the median or the modal rating of the three was used.¹ The distributions of these ratings were found to be normal; means, standard deviations, and estimated reliabilities for each scale are given in Table 1.

The scales were then intercorrelated and the resulting matrix (Table 2) was factored by the complete centroid method (Thurstone, 1947) until two factors were abstracted. The second factor residuals had the mean absolute value of $.03$ and they were distributed symmetrically about zero. The centroid factors were rotated obliquely in such a

¹Of the 488 triads of ratings (for each student on each of the eight scales) there was complete agreement in 16%; range of 1 point, 51%; 2 points, 26%; 3 points, 6.3%; 4 points, 0.7%. Because of excessive range (more than 2 points) in 7% of the triads, it was decided that the median or modal score, rather than the mean, reflected most accurately the central tendency of combined judgment.

TABLE 1
THE MEAN SCORES, STANDARD DEVIATIONS, AND
ESTIMATED RELIABILITIES OF THE
RATING SCALES

Rating Scale	M	SD	r_{xx}
Interpersonal Relations	4.80	.97	.65
Effective Energy	4.24	1.36	.76
Emotional Stability	4.61	1.10	.72
Professional Identification	4.98	1.05	.72
Written Communication	4.31	.88	.78
Research Ability	4.03	1.11	.84
Critical Scholarship	4.02	1.40	.77
Over-all Judgment	4.16	1.34	.87

way as to obtain a satisfactory simple structure. The factor loadings are given in Table 3. The correlation between the two factors was found to be .50.²

DISCUSSION

Factor A can be defined as one of *academic-scientific excellence*. It includes the scales of Written Communication, Research Ability, Critical Scholarship, and Over-all Judgment. The fact that the Over-all Judgment is included in this factor indicates that the faculty raters, in making a general appraisal of the student, considered almost exclusively the qualities of academic-scientific excellence.

Factor B is defined by two scales, Interpersonal Relations and Emotional Stability. For convenience in discussion, this factor can be referred to as the general *personality* factor.

The two remaining scales—Effective Energy and Professional Identification—are not of unit com-

TABLE 2
CORRELATIONS AMONG THE RATING SCALES

Rating Scale	IR	EE	ES	PI	WC	RA	CS
Effective Energy	.69						
Emotional Stability	.65	.58					
Professional Identification	.58	.72	.52				
Written Communication	.45	.59	.60	.61			
Research Ability	.36	.75	.47	.66	.72		
Critical Scholarship	.46	.73	.59	.65	.71	.85	
Over-all Judgment	.50	.73	.61	.62	.78	.84	.89

² The centroid matrix and the transformation matrix are available from: A. Suziedelis; Department of Psychology and Psychiatry, Catholic University of America; Washington 17, D. C.

plexity (they are represented significantly on both factors).

The correlation between the two factors (.50) would appear to indicate that the more gifted student is more likely to possess better interpersonal skills and to be more emotionally stable. It is also possible that high academic achievement may be conducive to greater comfort for the student in relating to peers and faculty. The correlation might be further explained by a possible "halo" effect operating in faculty appraisal of students, but this explanation is less likely in view of the high estimated reliabilities of the academic-scientific excellence scales (cf. Table 1). In fact, a comparison of the reliabilities of the scales of Factor A with the reliabilities of the other four scales yields im-

TABLE 3
FACTOR LOADINGS OF EACH RATING SCALE ON
THE TWO FACTORS

Rating Scale	Factor Loading	
	A	B
Interpersonal Relations	.00	.75*
Effective Energy	.38	.49
Emotional Stability	.27	.48
Professional Identification	.37	.43
Written Communication	.63	.15
Research Ability	.80	.00
Critical Scholarship	.77	.08
Over-all Judgment	.77	.08

* Italicized loadings are of unit complexity—significant (.35 or above) on one factor only.

portant corollary findings. The mean reliability of Factor A scales (.82) is significantly ($p < .05$) higher than the mean reliability of the other four scales (.72). Furthermore, the mean of the ratings on the scales of Factor A (4.13) is closer to the expected arithmetic mean (4.00) than the mean rating of the remaining four scales (4.66). The difference between the means of the two groups of scales is significant ($p < .05$). This appears to indicate that the faculty ratings of students on general personality variables are not only less reliable but also less discriminatory than ratings of academic and scientific excellence.

The findings of this study have some implications for the prediction of success in psychology from measures of verbal and mathematical ability. First, any definition of a criterion that includes the gen-

eral personality variable is likely to make the criterion less reliable; to that extent, any correlation coefficients reflecting the relationship of such a criterion with predictor measures would be reduced. Second, insofar as one would not expect measures of verbal and mathematical ability to correlate significantly with general personality variables, success criteria which do include general personality variables would be to that degree irrelevant.

These observations seem to apply directly to some of the findings reported in the studies reviewed. Such criterion definitions as "potential professional contribution" (Platz et al., 1959) and "administrative, clinical, and service competence" (Watters & Paterson, 1953) appear to include the general personality variable to a significant extent; in fact, both these criteria are close in definition to the scale of Professional Identification of this study which is represented equally in both the factor of academic-scientific excellence and the general personality factor. Consequently, it is not surprising that correlations of these criteria with the predictor measures are low and not significant (.20, Platz et al., 1959; .17, Watters & Paterson, 1953).

Other criterion definitions used in the studies reviewed appear to be more specific and relevant. "Potential scientific contribution" (Platz et al., 1959), "research competence" (Hyman, 1957), "intellectual competence" and "research capacity" (Watters & Paterson, 1953), and order of "ability" and "suitability for MA and PhD" (Cureton et al., 1949) are definitions closely approximating the scales of Factor A (academic-scientific excellence) in this study. Despite the apparent specificity and relevance of these criteria, however, some of the correlations with predictor measures were found to

be not significant (Hyman, 1957; Watters & Paterson, 1953). In seeking a possible explanation of the wide range of the findings, it is noted that none of these studies includes separate scales of general personal adjustment. It is suggested that, in the absence of opportunity to rate students specifically on personality attributes, the personality variable is unintentionally included by the raters in judgments of academic-scientific excellence. Such unintentional inclusion of the personality variable would attenuate the reliability and the relevance of the criterion in much the same manner as with the scales less specifically defined. For the purpose of reducing the likelihood of such contamination, it may be desirable in further studies on prediction of graduate success to include separate "buffer" scales of general personal adjustment in the dependent variable.

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FEEDBACK FROM BACHELOR OF ARTS PSYCHOLOGY GRADUATES

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THE impetus for this study was an article by King and Kimble (1958) which discussed various job opportunities available to undergraduate psychology majors, an outcome of a questionnaire study of various organizations employing psychologists which asked items about kinds of positions available, special factors in hiring, salary, and opportunities for advancement. Taking this as a starting point, we were interested to learn where our BA psychology graduates now were; furthermore we wanted to know how they viewed their undergraduate program of studies in retrospect, especially how they valued the more theoretical courses which were required.

A brief summary of the psychology undergraduate sequence at the University of Buffalo is pertinent here. Majors are taken into the department after completion of a two-semester Introductory Psychology course, typically taken in the freshman year, plus three semesters of Experimental Psychology and Statistics. As majors they are required to complete 39 semester hours of work in the department where the orientation is heavily theoretical. Various "applied" courses, such as Psychology of Adjustment, may be taken but these are in addition to the stated major requirements. All fourth year students participate in Senior Seminar throughout the last year where an attempt is made to give students an overview of the entire field and to have them organize the knowledge acquired in earlier, individual courses. Each major also signs up for one semester of tutorial or independent study, guided by one of the staff, which may be an original experiment or an extensive library project. All of this culminates in a 9-hour comprehensive examination ranging over the whole area of psychology.

We chose a 10-year period, 1948-58, in order not to deal with mostly "new" people. For this period we found a total of 563 psychology majors to which a questionnaire, together with a covering letter from the Chairman of the department, was

mailed.¹ We kept plugging with postcard reminders and second mailings of questionnaires, even telephone calls, in order to maximize the returns. In the end we received 375 usable questionnaires (or 73% of the sample). We also asked respondents to be frank; we invited unsolicited comments and made a content analysis of these. We were also pleased that we received some negative evaluations which meant, if nothing else, that our returns were not just a "whitewash."

Our 375 questionnaires actually involved three different sets of returns brought in by the various follow-up means we employed. These three waves were compared for characteristic differences and few of significance were found. The first wave of returns came from predominantly early BA degrees (1948-52) and it was this group that showed the predominance of additional degrees. Later sets of returns (second and third wave) came from younger people and more of these stated they were "on the way" to additional degrees. No differences turned up in regard to sex ratio, or on replies to the advice item (Would they do it again?), or in the numbers of people who wrote spontaneous comments. With such congruity we felt secure in merely dealing with early versus late degree people rather than with three different sets of returns.

Respondents were also compared with nonrespondents (age at BA degree, male-female ratio, year of graduation) and at least in terms of these characteristics no differences were found. After the third request was sent out, we were pulling in so few additional returns that further efforts in this direction were abandoned.

The 375 respondents contain 87 females and 288 males whose age at receipt of the BA degree runs

¹ Edward S. Jones helpfully collaborated on the questionnaire employed here. Thanks are also given to Charles Grant for his careful work in coding of all replies and to Kenneth Robinson of the University of Buffalo Data Processing Center for cooperation in punching the IBM cards and running off the specified breakdowns.

all the way from 19 to 46. Modal age at receipt of the BA is 25.5 years. These ex-students are to be found, occupationally, all the way from high status academic and industrial positions down to clerical jobs. By no means have all of them continued with advanced academic degrees but there is still a good deal of "upward striving" as indicated by the rather large numbers of people who state they are continuing with some advanced degree program. Not only are there PhD psychologists, but also chiropodists, pharmacists, assistant deans of education, engineers, nurses, paymasters, foremen, TV script editors, salesmen—a wide range of the upper half of the occupational hierarchy.

WHERE ARE THEY NOW?

Table 1 presents the occupational breakdown as of early 1959. The data are divided into an early (BA degrees between 1948 and 1952) and late

(1953–58) period, the former representing the more stable group occupationally.

This early group contains few graduate students or military trainees. Most of these people are in the occupational niche where they will likely remain. Here we see that 13% of these are psychologists and that another 9% have entered social work; 8% have obtained their MD or DDS degrees and are currently practising as such. Doctors outweigh dentists and it is clearly apparent that medical school, as against dental school, is the preferred route for this group of graduates. Less than 1% have gone into such specialties as osteopathy or chiropody. Looking at the entire early group, close to 50% are in the professional strata and most of these are in "service" areas, scientific or otherwise, involving fairly close interpersonal relations—areas where it is traditionally thought psychological training clearly contributes.

TABLE 1
OCCUPATIONAL DISTRIBUTION OF PSYCHOLOGY GRADUATES

Occupation	Early (BA 1948–52)		Late (1953–58)		Total		Advice: Do It Again			
	N	%	N	%	N	%	Yes		No	
							N	%	N	%
Graduate student now	3	1	30	22	33	9	25	76	8	24
Housewife/mother	39	16	14	10	53	14	35	70	15	30
In military	1	1	12	9	13	3	9	69	4	31
Professional:										
Psychology	30	13	1		31	9	24	77	7	23
Education—										
College level	9	9	2	11	11	10	22	66	11	34
Elem. or sec. schl.	13		13		26		22	66	11	34
Social work	21	9	8	6	29	8	17	65	9	35
MD	17	7	1		18	5	12	70	5	30
Dentist	2	1	1		3	1	1	33	2	67
Other medical ^a	1		4	3	5	1.5	2	40	3	60
Law	5	2	—		5	1.5	3	60	2	40
Ministry	2	1	2	1	4	1	3	75	1	25
Miscellaneous ^b	8	3	2	1	10	2	4	40	6	60
Total	108	46	34	25	142	38	88	65	46	35
Sales-advertising	29	12	18	13	47	12	27	57	20	43
Managerial-industrial	45	19	16	11	61	16	23	38	36	62
Clerical	13	5	9	7	22	6	13	65	8	35
Art-literary	3	1	1		4	1	4	100	—	
Totals	241	100	134	100	375	100	224	62	137	38 ^c

^a Other medical ("paramedical group") includes optometry, chiropody, osteopathy, nurse.

^b Miscellaneous includes "research worker," chemist, engineer.

^c Total in Advice columns does not equal 375 since some respondents failed to check this item.

Another large segment of this early group (about 30%) is found in business and industry. A wide variety of job titles is found here; psychology graduates turn up in personnel, industrial relations, and various supervisory roles where psychological training would be expected to make a contribution. There are also graduates now found as credit manager, wholesaler, paymaster, traffic coordinator, claim adjuster. It is also this industrial group (as against sales-advertising) who infrequently say they would do it again (i.e., be a psychology major)—38%.

Turning attention to the late graduates in Table 1, many of these people are too recently "out" to form a definitive picture: 22% are now in some graduate program and another 9% are in the military. Psychology, education, social work, medicine account for the largest professional categories here; the percentage in "paramedical" slots here jumps to 3; sales-advertising continues to be a large group. Dental, legal, theological schools continue to attract very few graduates.

Males versus Females

The respondent sample consisted of 288 males and 87 females (24%). Data in Table 1 are not broken down into male-female categories largely because of the smallness of the female group. Present occupation exhibits the expected differences. Males range all over the spectrum indicated in Table 1 with, of course, the exception of the housewife/mother category: here we find 61% of our females. More females, as expected, are now found in the elementary and secondary teacher group (10%) and few males (5%). Females also show up well in professional occupations other than public school teaching (as social work and business): here 14% of the group, but males produce more than twice the number in this category (36%).

Males have completed more advanced degrees: 37% as against a mere 17% for the females. But it is to be noted that among these women 34% describe themselves as on the way to another degree whereas only 29% of the males say so. The female graduate degrees are largely concentrated at the MEd level with smaller groups working for the MA in psychology or the MS in social work.

Our largest female group is the housewife/mother category and these people see their undergraduate study of psychology as primarily contributing to their own existence as persons—helping with better

adjustment and with group dynamics techniques in community affairs. They also feel that their psychological training has been of direct use "on the job." By and large this group has not gone on to further graduate work.

Advanced Degrees

A total of 61% of all respondents indicated they had completed advanced training or were currently enrolled. Some of this is a reflection of the feeling of many (12% specifically mentioned this in spontaneous remarks) that a BA degree person from psychology cannot work in this profession; others, however, have utilized their psychological training as a stepping stone to further graduate work. The large areas of further work, as expected, are in the medical-dental combination, social work, education, and psychology but also pharmacy and engineering.

WOULD THEY DO IT AGAIN?

One item on the questionnaire tried to get at a measure of satisfaction by asking respondents if they were now advising a young person, or had it to do over again themselves, would they recommend psychology as an undergraduate major. Here they were given three alternatives to check: Yes, as a major; No, only as a minor; No, only a couple of courses. Table 1 presents these data broken down into a Yes-No dichotomy.

The overall endorsement for Yes (as a major) is 62%. If one looks only at respondents clearly in professional categories, there is a 65% endorsement. Housewives and mothers are slightly more enthusiastic; MDs are generally approving and would "do it again" but our small group of dentists and "paramedicals" are anything but laudatory. The business folk, especially those in industrial slots, are very lukewarm (only 38% Yes) whereas the sales-advertising cluster gives a more approving endorsement (57%).

Looking at these data from the early-late categories, our older and more settled respondents are not so sure. Slightly more than half of the early group would do a repeat. In brief, there is some real disenchantment with the early BA degree people. This early group feels that more emphasis should have been given to both the applied and social psychology areas in their undergraduate training. One surmises these people, being longer out in the community, now see problems concerned with group dynamics, mass media of communication,

conformity as the relevant issues and they feel their undergraduate training could have been better on this score. Social psychology is now an integral feature of the undergraduate sequence; it looks as if more attention should be given to the applied area, however.

Statistics and Experimental Psychology

The basic fundamentals of the curriculum were thoroughly endorsed. Because of the widespread requirement in all undergraduate programs of both Statistics and Experimental Psychology, respondent comments only concerning these two courses will be given.

Statistics. Few respondents felt negatively about this requirement and most did not specifically comment. Forty percent, however, came out strongly for its retention. What is surprising here is that this Yes vote did not come solely from the graduate degree people; it was, rather, the people in sales and advertising, and also the mothers, who reported their present appreciation of this departmental requirement. We do, however, have some malcontents.

Experimental Psychology. Seventy respondents specifically referred to this course: 63 positive and 7 negative. Of the wide variety of courses to which students had been exposed, this particular course provoked the most outspoken praise and, in some cases, blame.

Theoretical versus Practical Courses

Here we had in mind learning about ex-students' feelings of certain "service" courses as against those clearly theoretical and not applied. For "practical" material we had in mind such things as Spock and specific Gesell developmental norms plus also some mental hygiene material (defense mechanisms and the like). We were also interested to learn whether graduates now in business—and particularly our current mothers—would heavily endorse such empirical training.

Forty-six percent made no write-in remarks and are therefore neutral on the subject; 22% of respondents give us an outright endorsement; another 19% straddle the fence, in effect saying it is wise to have both. Only 13% come right out and say that the theoretical material should be abandoned.

Our housewife/mother category reports that theory is more helpful in their current behavior. Here we have a total of 53 respondents of which 66% say Yes as to repeating their psychology major.

There is little expressed wish for further courses in child and adolescent psychology (a mere 2% vote for this).

Miscellaneous Comments

It is impossible in a short article of this type to give the flavor of all the comments and attitudes fed back to us. One or two additional items stand out from this large collection. One of these is the stated disenchantment with the BA degree in psychology, by which is meant that such a person cannot work professionally in the area and that majoring students require (and would be most grateful) for better advice in this regard. A total of 45 respondents (one of our largest groups) specifically made this point.

We also scanned written remarks for negative items, such as complaints about tough grading, partisan instructors, too many required courses. For all of these we received a very small number of replies. For example, 16 respondents specifically complained about biased or partisan instructors who, they felt, rode a pet theory to the neglect of other content. Only 9 respondents felt there were too many required courses in the program; another 7 respondents had negative feelings about how grades were handed out. Most new course suggestions are now an integral part of the curriculum (social, child-adolescence, human engineering, mental hygiene, etc.).

Value of Undergraduate Work

We asked all respondents to rank each of the following statements in order of felt importance in order to obtain their overall evaluation of their psychology major. These are listed below in the order our respondents regarded as most to least important:

- Apart from graduate training, of direct use on my job
- Helped me towards better adjustment (analyzing motives, behavior, emotions, etc. in myself and others)
- Helped me along group dynamic lines (interacting with others in groups, participation in community affairs, etc.)
- As a stepping stone for graduate professional training
- No more useful than other subjects, but I enjoyed it as a major.

Here we find our least favorable statement (no more useful than other subjects) gets the lowest endorsement. One third of respondents clearly rate undergraduate psychology as a way station to more graduate work; 54% say, aside from this, it has

been of direct use on their job. When we combine these two categories, we can say that approximately three-fourths feel some real value from their training.

PSYCHOLOGISTS

Table 1 presented a breakdown of respondents in terms of current status. Certain of these groups were of sufficient size to warrant special treatment. Here we will only discuss the findings for the professional psychology group. Forty-five respondents comprise this group, larger than the 31 indicated in Table 1 because here we are also including students currently in graduate psychology programs.

As to degree status, 19 have earned or are on the way to the MA; similarly, 26 PhDs. These give a very good endorsement to their undergraduate training (Rank 1 as most favorable; 5 as least favorable):

As stepping stone to graduate work	1.2
Apart from this, of direct use on my job	2.8
Helped towards better adjustment	3.3
Helped along group dynamic lines	3.3
No more useful than other subjects	4.3

While this appears to be generally favorable endorsement, when one looks at responses concerning our advice item—would they do it again—a more sober evaluation turns up:

Yes, as a major	32	(71%)
Yes, but only for PhD	7	(16%)
No, only as a minor	5	(11%)
Few courses only	1	(2%)
	45	(100%)

One might presume these negative comments come from a group of frustrated MAs but this is clearly *not* the case. The six persons who clearly say they would not do it again are all PhD people; three MAs are included in the "Yes, only PhD" item. But the Nos, however, are not against psychology but mainly against what they see as too narrow undergraduate specialization; they are *not* saying that they wish they were in some other professional slot.

Approximately 13% of the group say quite clearly they would now do it differently—that they would probably now not advise a psychology undergraduate major. This is a distinctly better showing than that reported by Kelly and Goldberg (1959) who

asked PhD clinical psychologists this same question. Of this group, all professionals typically working in "service" settings, 39% of the 228 respondents said they would now head for psychiatry, law, business, or "other" occupational areas (Table 4, p. 6). These two follow-ups are, of course, not comparable but it is instructive that we secure a much higher percentage of endorsement from the undergraduate sample.

Regarding what these people felt about the important aspects of undergraduate training, there was a majority approval for tutorial work, experimental, and statistics (75% or better). Even senior comprehensive examinations receive almost a 50% Yes vote; only eight respondents specifically stated negative feelings here.

SUMMARY

We have reported the results of a follow-up study of psychology undergraduate majors covering the years 1948–58, basing our results on 375 (73%) returned questionnaires. Males predominate and have completed a greater number of advanced degrees. Occupationally these graduates are a heterogeneous group: about 10% are now graduate students, 15% are housewives, 38% are in various professional occupations, and 35% might be classed as business people. Sixty-two percent indicate further graduate training, either completed or "on the way," some of which appears to be motivated by disappointment that the BA psychology person cannot work professionally in psychology. A respectable 12% go on to graduate work in psychology; while not dissatisfied, many would wish for broader undergraduate training. About two-thirds now say they would do it again—i.e., be a psychology major—and these are not only the professional folk. Important "core" aspects of the curriculum are uniformly endorsed, especially tutorial work, statistics, and experimental psychology; there is also thorough endorsement of theoretical as against practical courses. Most see their undergraduate training as being of real use on their jobs.

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STUDENT REACTIONS TO THE HISTORY OF PSYCHOLOGY

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IT is the purpose of this article to discuss the teaching of the history of psychology as a part of the larger problem of the teaching of psychology itself. It seems to the writer that there is a natural link between the teaching of psychology and a concern with the historical background of the subject. But programs relating to the teaching of psychology usually draw small audiences at the conventions, and although Division 2 has grown within the last few years, it still is not one of the largest. Interest in the history of psychology tends to be low also. Watson (1960) calls it "a neglected area."

While History of Psychology ranks in the top 10 courses recommended as "ideal" in the undergraduate training for applicants to graduate school, it ranks far below both Experimental Psychology and beginning Statistics (APA, 1958). Also, despite this stress on the desirability of the course at the undergraduate level, it was not one of the 10 most commonly taught undergraduate psychology courses a little more than a decade ago (Wolfe, 1947).

It is perhaps to be expected that the initial reaction of students, particularly undergraduates, to the study of the history of psychology would be unfavorable. This would seem especially likely in view of the attitudes psychologists themselves hold. Some effort usually is necessary to persuade a student that things which have taken place some time ago are truly significant.

The University of Wisconsin at Milwaukee offers an undergraduate major in psychology and selected graduate courses. As a part of the major, the student is required to take a course in either History of Psychology or in Modern Viewpoints. Each course has a prerequisite of nine credits in psychology and is open to nonmajors as well as majors. The writer has taught the history course in the UW-M psychology department for several years. In an effort to shed some light on student reaction to the course material, the writer formulated a short questionnaire. In January 1960, it was administered to the students who then were completing the history course. Copies were mailed to those mem-

bers of two previous classes who could be most easily contacted. Later, toward the end of the summer class, copies were distributed to the students then enrolled. In all, 53 replies were secured, 26 from men and 27 from women. These represented four different groups of students, spanning a period of approximately 3 years. Students were asked to write their names on the questionnaires but were assured that their responses would have no effect on their grades. It is believed that they were frank in their responses. Although a detailed analysis of the data was made, the results should not be regarded as anything more than suggestive.

The textbook was Boring's (1950) *A History of Experimental Psychology*. The method of instruction was largely lecture with some effort made to stimulate discussion. Course work followed the textbook fairly closely, with the omission of a few chapters. No outside reading was assigned, but some extra material was presented in class by the instructor. Of the 53 students, 30 were psychology majors, and at least 2 were minors. The proportion of men who were majors was somewhat greater than that of women. Among nonmajors, the course is apparently more attractive to women.

Table 1 presents a summary of student attitudes toward the history course. They were asked to in-

TABLE 1
STUDENT EVALUATIONS OF THE HISTORY COURSE

Response	Number of Students
Liked the course	29
Neutral toward the course	17
Disliked the course	7
"Very useful"	22
"Moderately useful"	27
"Of little or no use"	3
Should require History and Modern Viewpoints	24
Should require one or the other	25
Should require neither	4

TABLE 2
STUDENT REACTIONS TO TOPICS

Topic	Number of Choices
Those Liked Best:	
Hypnotism	13
Dynamic Psychology	12
Behavioristics	5
Gestalt Psychology	4
American Psychology: Its Pioneers	3
Phrenology and the Mind-Body Problem	3
Those Liked Least:	
The Personal Equation	14
Psychophysiology in the First Half of the Nineteenth Century	5
Physiological Psychology of Sensation: 1800-1850	3

dicating how well they had liked it, how useful it would be in the future study of psychology, and whether psychology majors should be required to take either the History of Psychology or the Modern Viewpoints courses.

The students were asked to indicate which topic they had liked most in the course. A few people listed more than one. As might be expected, a wide range of answers was obtained. In all, there were 59 answers which could be classified under 18 different topics. About half the answers were related to the period from the late 1800s on. Table 2 shows the most popular topics.

Under Dynamic Psychology, a number of the students specified Freudian psychology. All three of the students who mentioned Phrenology also mentioned having liked Hypnotism. It was a surprise to the investigator that the chapter, British Psychology (Darwin, Galton, early animal psychology, etc.), received only one vote.

For topics liked least, there was again a wide scattering of selections. Forty-three responses were given and 19 different topics mentioned. Twelve students, however, did not indicate any disliked topic. Table 2 presents those most commonly listed.

When answers pertaining to psychophysiology, physiology, sensation, and perception were combined, the total was 12. This is significant in view of the fact that the course as taught leaves out three of Boring's chapters on this kind of material. Evidently the two-and-a-half that remain are "too

much" for some students. There was some evidence also of an antiphilosophical orientation. Whether this reflected the difficulty of this material or the well-known American aversion to things not "practical" would be hard to say.

The questionnaire called for additions to, or eliminations of, course content. Many students had no additions to suggest, fewer additions than eliminations being offered. There were, however, 30 recommendations for additions with 17 of these being different. The most frequent suggestion was for added material on various kinds of applied psychology. Next most commonly suggested was a greater stress on recent material. Altogether 16 of the 30 suggestions pertained to modern and/or applied developments.

Forty-six recommendations were made for eliminating topics. Even so, many of the students did not make suggestions here, a few of them indicating that they did not feel qualified to do so. Of the 46 made, 24 were different. No topic received more than 6 choices, but at least 11 of the suggestions concerned physiological material of one kind or another. "Introductory or early material" was listed most often. The Personal Equation and "all or most of phrenology" were each mentioned 4 times. There seemed to be a common feeling that there was just too much material (for a one-semester course, presumably).

Since the study of history so often involves the study of individuals and their specific contributions, and since we identify so readily with famous persons, the students were asked to indicate which two or three people had, in their opinion, made the greatest contribution to psychology so far. It is surprising that such a variety of answers was given. Thirty-one different names were mentioned; however, 96 of the 149 votes went to the top five persons (see Table 3).

Few psychologists would quarrel seriously with these first five choices. According to Seminara and

TABLE 3
GREATEST CONTRIBUTORS TO PSYCHOLOGY

Person	Number of Choices
Wundt	38
Freud	26
James	13
Helmholtz	13
Darwin	6

Peters (1959), foreign psychologists rate Freud, Wundt, and James at the top among significant contributors to psychology. American psychologists (Becker, 1959) put Freud and James in first and fourth place, respectively, with Wundt a little lower. Somewhat surprising to the investigator was the comparatively low rating given to Galton, Pavlov, and Hall by the students. It was assumed that there might be a difference between the A students (6 men and 4 women) and the other 43. The pattern did not differ substantially for the two groups, however. Wundt was in first place for both groups, followed by Freud, James, and Helmholtz. The major difference was that the A students did not rate Darwin as high as the others did.

The A students' responses were also analyzed for reactions to favorite topics. No single strong area of interest emerged, but it is perhaps significant that none of them mentioned Hypnotism or Phrenology. Only one listed Dynamic Psychology (i.e., Freudianism). In the main, they concentrated on the more "rigorous" topics: Behavioristics, Gestalt Psychology, philosophical antecedents, scientific methodology, Fechner, and Helmholtz.

The investigator gained from this experience the conviction that students like to evaluate their courses and that they tend to do so honestly. Their level of sophistication in the evaluative process may leave something to be desired. Good students may

not differ too much from poor students in their reactions to a course. There is some tendency for students to like the more "glamorous" or "dramatic" aspects of the history of psychology and to be interested in more recent material. While not precisely uninteresting, the history of psychology might be presented so as to seem *more* interesting to the students. It is the investigator's opinion that this can be accomplished and that it is high time to do it. The investigator intends to collect additional samples of student opinion concerning the History of Psychology course and to survey American universities to determine the frequency with which History of Psychology is taught.

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A SURVEY OF IMPORTANT PSYCHOLOGICAL BOOKS

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UNDERGRADUATE seniors taking individual readings courses with the author have frequently asked for a list of books which could be classed as "landmarks" in psychological thinking and which would be an aid to them when they entered graduate school. This at first appeared to be a fairly simple request. However, the number of books of some relevance is legion, and it turned out to be impossible to decide which ones are of the greatest importance. It was also apparent to the author that his own psychoanalytic bias was having a decided effect upon what these students were reading.

It was obvious that a systematic approach was needed in finding an answer to this problem.

PROCEDURE

From the 1958 *Directory* of the APA, I made a random selection of 100 psychologists who possessed PhDs and were staff members of colleges or universities. A personal letter was sent to each psychologist to explain the purpose of the survey, along with a reply form and stamped envelope. They were informed that the purpose of the survey was to acquaint students with great landmarks in psychological thinking. The reply form had 15 numbered blanks and the following heading:

List below the books that you think are the most important or classical psychological works. You may select fewer than fifteen books if you so desire. However, please list the books in what you think is their approximate order of importance, beginning with the most important book. You may list books written by persons other than psychologists. The books do not necessarily have to be old. In each case, please give both the author and the title of the book.

The investigator received 49 responses to this letter. A second letter, containing the same materials and sent airmail to the remaining 51 psychologists, elicited 21 more responses. A third letter, containing the same materials and sent airmail to the remaining 30 psychologists with an airmail stamp on

the return envelope, elicited 15 more responses, making a total of 85 responses, 5 of which were refusals. Consequently, the results are based on the analysis of 80 replies to the survey.

RESULTS

The raters were allowed to list fewer than 15 books. Five raters listed from 4 to 9 books, 21 listed from 10 to 14, and the rest listed 15. In

TABLE 1
POSITION POINTS, RATERS, AND MEAN POSITION FOR THE
TWENTY-NINE AUTHORS LISTED BY TEN OR
MORE SUBJECTS

Author	Position Points	Raters	Mean Position	Mean Position Rank
Freud, S. (12)*	922	64	2.6	1
James, W. (2)	722	60	3.2	2.5
Hull, C. (5)	456	51	6.6	11.5
Pavlov, I. (2)	446	42	4.4	4.5
Watson, J. (5)	441	49	6.0	9
Boring, E. (3)	322	35	6.3	10
Skinner, B. (4)	254	28	6.8	13.5
Thorndike, E. (6)	244	32	7.6	21.5
Woodworth, R. (5)	239	29	7.5	20
Tolman, E. (1)	233	33	7.9	23
Köhler, W. (3)	227	34	8.3	25
Lewin, K. (3)	205	26	7.4	19
Darwin, C. (2)	201	17	3.2	2.5
Ebbinghaus, H. (2)	194	23	6.6	11.5
Koffa, K. (3)	189	23	6.8	13.5
Wundt, W. (5)	170	15	4.4	4.5
Allport, G. (2)	160	20	7.0	15
Helmholtz, H. (2)	153	14	4.8	6
Titchener, E. (8)	148	16	5.8	8
Fechner, G. (1)	131	13	4.9	7
McDougall, W. (2)	125	16	7.2	17.5
Hebb, D. (1)	109	16	8.2	24
Galton, F. (2)	103	13	7.1	16
Terman, L. (4)	100	16	8.8	28
Lashley, K. (3)	94	12	7.2	17.5
Spearman, C. (2)	84	12	8.5	26
Murray, H. (1)	74	10	7.6	21.5
Rogers, C. (3)	69	11	8.7	27
Piaget, J. (4)	57	11	9.8	29

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* Number in parentheses indicates the total number of titles listed for each author.

total the 80 raters gave 1,099 responses involving 278 books by 180 authors which indicates some general agreement since it was possible for them to list 1,099 different books by 1,099 different authors.

Authors will be considered first. Of the 180 different authors, 84 were listed by only 1 rater and 29 were listed by 10 or more raters. These 29 names are ranked in three separate ways in Table 1. (a) Raters: the number of raters listing the author at least once. (b) Position Points: a score derived from the rank ordering of the books. The book named first by a rater was given 15 position points, the book listed second was given 14, and so forth. The position points were then added up to get this score. Since it was possible for a rater to list two or more books by a given author, Position Points is based upon a somewhat larger N than that indicated by raters. (c) Mean Position: the rank given to an author by the raters who listed him, regardless of the number listing him. The Mean Position

was computed by dividing position points by the larger N and subtracting the result from 15. The names in Table 1 are given in the order of Position Points; this score would appear to be more valid than the others since it takes into account both the number of raters citing the author and the rank order they gave to the author.

Some of the discrepancies between rank of authors by Position Points and rank by Mean Position are rather large. Darwin, Wundt, Fechner, Helmholtz, and Titchener have a high rank on Mean Position and a low one on Position Points indicating that the small number of psychologists citing these authors tended to rank them very high. Hull shows the reverse pattern since the large number of raters selecting him ranked him rather low.

When these results are compared with Becker's (1959) survey of outstanding contributors to psychology, we find only three names appearing in his table of 10 outstanding contributors that do not

TABLE 2
POSITION POINTS, RATERS, AND MEAN POSITION FOR THE TWENTY-EIGHT BOOKS LISTED BY
TEN OR MORE SUBJECTS

Title	Position Points	Raters	Mean Position	Mean Position Rank
James: <i>Principles of Psychology</i>	718	60	3.0	3
Hull: <i>Principles of Behavior</i>	404	48	6.6	16
Pavlov: <i>Conditioned Reflexes</i>	363	33	4.0	6
Freud: <i>Interpretation of Dreams</i>	292	24	2.8	2
Boring: <i>History of Experimental Psychology</i>	291	32	5.9	12
Watson: <i>Psychology from the Standpoint of a Behaviorist</i>	262	28	5.6	11
Freud: <i>Basic Writings</i>	236	18	1.9	1
Tolman: <i>Purposive Behavior in Animals and Men</i>	233	33	7.9	23
Ebbinghaus: <i>Memory</i>	181	21	6.4	14
Skinner: <i>Behavior of Organisms</i>	177	22	7.0	20
Koffka: <i>Principles of Gestalt Psychology</i>	166	21	7.1	21
Darwin: <i>Origin of Species</i>	162	14	3.4	5
Allport: <i>Personality: A Psychological Interpretation</i>	155	19	6.8	18
Freud: <i>General Introduction to Psychoanalysis</i>	152	13	3.3	4
Köhler: <i>Gestalt Psychology</i>	142	17	6.6	16
Watson: <i>Behaviorism</i>	141	14	4.9	9
Woodworth: <i>Experimental Psychology</i>	137	20	8.2	24.5
Fechner: <i>Elements of Psychophysics</i>	131	15	6.3	13
Thorndike: <i>Animal Intelligence</i>	131	13	4.9	9
Helmholtz: <i>Handbook of Physiological Optics</i>	124	12	4.7	7
Wundt: <i>Principles of Physiological Psychology</i>	121	12	4.9	9
Hebb: <i>Organization of Behavior</i>	109	16	8.2	24.5
McDougall: <i>Introduction to Social Psychology</i>	105	13	6.9	19
Lewin: <i>Dynamic Theory of Personality</i>	102	14	7.7	22
Lashley: <i>Brain Mechanisms and Intelligence</i>	84	10	6.6	16
Köhler: <i>Mentality of Apes</i>	78	14	9.4	28
Spearman: <i>Abilities of Man</i>	78	12	8.5	27
Murray: <i>Explorations in Personality</i>	74	11	8.3	26

appear in our table: Binet, Rorschach, and Thurstone. In our survey Binet was cited by nine raters, Rorschach by two, and Thurstone by nine. Perhaps their important contributions are not reflected in their written work. Watson, who takes fifth place in Table 1, does not appear in Becker's general table, although Becker does have him listed in tenth place in a table of 10 outstanding American psychologists.

The books will now be considered. Of the 278 books listed by the raters, 146 were listed only once and 28 were listed 10 or more times. The titles and ranks of these 28 books are given in Table 2.

There are a number of large discrepancies between the rank of books by Position Points and their rank by Mean Position. Books by Hull, Tolman, Skinner, and Koffka have a high rank on Position Points and a low one on Mean Position; whereas books by Freud, Thorndike, Helmholtz, Wundt, and Lashley show the reverse pattern. The three books by Freud in Table 2 all fall within the

first four ranks by Mean Position. In other words, there seems to be some disagreement as to which of Freud's books is the most important, but complete agreement that one of them should be near the top of the list.

In conclusion, the books listed in Table 2 are judged by psychologists to be great landmarks in psychological thinking. Hence it can be assumed they are important for understanding modern psychology. One word of caution: there is obviously a good deal of disagreement since only two books were listed by more than 41% of the raters and only seven were listed by 30% or more. We can say with some assurance that it would be important for a young psychologist to be acquainted with these seven books.

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APPLICANTS FOR FELLOW STATUS: 1962

LISTED below are the names of 123 Members of the APA who are applying for Fellow status, together with the names of the divisions (in italics) through which they are applying. In accordance with Council action of 1958, some of the divisions have instituted an invitational system, in whole or in part. However, no differentiation is made in the list below.

Members are invited to transmit information concerning the qualifications of these applicants both to the appropriate division and to the APA Membership Committee.

No final action has been taken on these applications by the divisions, nor by the APA Membership Committee. All applicants listed are applying for Fellow status for the first time through the indicated divisions. Not included on this list are persons already Fellows in the APA who may be applying for Fellow status in additional divisions, nor persons whose names have previously been published as applicants.

It is from this list (plus certain applicants who are reapplying) that the divisions, by August 1, 1961, will make their preliminary nominations to the APA Mem-

bership Committee. At the APA Annual Meeting in September 1961, each division will submit its final list of nominees after the divisional business meeting. These final recommendations, together with recommendations from the APA Membership Committee, will be considered by the Board of Directors; a list of Members recommended for transfer to Fellow status will then go to the Council of Representatives from the Board for vote. Fellow status for those elected will become effective January 1, 1962.

The deadline for filing applications for initial Fellow status, whether at the initiative of the Member or by invitation from a division, was January 1, 1961. The deadline for those to be considered in September 1962 will be January 1, 1962. By that date, a copy of the Uniform Fellow Blank will need to be filed with the APA Central Office (addressed to the attention of the Membership Committee), either by the applicant or by the division that issued an invitation. The necessary blanks and instructions must be obtained from the appropriate division secretary (listed on the inside back cover of the November 1960 *American Psychologist*).

Adams, Joe Kennedy, *General*
Aldaba-Lim, Estefania, *Clinical*
Alexander, Irving Emanuel, *Clinical*
Amsel, Abram, *Experimental*
Armington, John C., *Experimental*
Attneave, Fred, *Experimental*
Baker, Lynn E., *Military*
Bindman, Arthur Joseph, *Clinical*
Birch, Jack Willard, *School*
Blackham, Garth J., *School*
Blough, Donald S., *Experimental*
Bourke, William Theodore, *Clinical*
Bradford, Leland Powers, *SPSSI*
Brown, Gladys Guy, *Clinical*
Brown, John Lott, *Experimental*
Brown, Roger William, *Personality and Social*
Brown, William Edward, *Industrial and Business*
Browning, Rufus C., *Military*
Callis, Robert, *Counseling*
Cannell, Charles F., *SPSSI*
Canning, William Matthew, *School*
Capobianco, Rudolph J., *Educational*
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Eastep, Chester Sylvester, *School*
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Fein, Leah Gold, *Clinical*
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Flanders, Ned Allen, *Educational*
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Hagin, Rosa A., *School*
Hauck, Paul Anthony, *Clinical*
Held, Richard M., *Experimental*
Henderson, Norman Bromage, *Clinical*
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Herrmann, Robert Stott, *Military*
Hewer, Vivian Humphrey, *Counseling*
Hills, John R., *Evaluation and Measurement*
Himelstein, Philip, *Personality and Social, Clinical*
Hirsch, Ernest Albert, *Clinical*
Hoffman, Martin Leon, *Personality and Social, SPSSI*
Holland, John Lewis, *Educational*
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Sherif, Muzafer, *SPSSI*
Siegel, Alberta Engvall, *Developmental*
Siegel, Miriam G., *Clinical*
Simon, Jennings Richard, *Industrial and Business*
Stein, Morris Isaac, *Personality and Social*
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Tamkin, Arthur S., *Clinical*
Teuber, Hans-Lukas, *Experimental*
Thistlethwaite, Donald L., *Educational*
Tiedeman, David Valentine, *Counseling*
Tolor, Alexander, *Clinical*
Torrance, Ellis Paul, *Educational*
Tucker, Joseph A., *Military*
Turnbull, William Watson, *Educational*
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Warren, Sol L., *NCPAD*
Weiss, Robert Stuart, *SPSSI*
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Wilson, Robert C., *Evaluation and Measurement*
Zemlick, Maurice J., *Clinical*

A NOTE FROM THE CHAIRMAN OF THE BOARD OF PROFESSIONAL AFFAIRS

THERE has been very active consideration by many psychologists during the last several months of the provisions in health insurance policies concerning the eligibility of psychologists for reimbursement under the terms of these contracts. The matter is of great importance to psychologists in private practice, and the concern which many of this group have shown is quite understandable. Currently, the problem has become increasingly important and somewhat controversial as a consequence of a policy position recommended by the Board of Professional Affairs at its May meeting in 1960, concurred in by the Board of Directors, and subsequently approved by the Council of Representatives. The policy statement in question reads as follows:

The BPA notes that sickness and accident policies are so written as to require medical determination of the need for treatment as a means of defining the nature of the coverage. It is untenable for psychologists to make a determination regarded as a medical function under such policies. Where there is provision for payment to psychologists when medical judgment indicates the need for psychological services, BPA feels the arrangement is a reasonable one.

Hence, BPA votes to recommend to the Board of Directors that future efforts should be directed not at changing the basic principle of insurance policies with regard to determination of need for treatment but rather at gaining general acceptance of provisions for covering psychological services when deemed necessary by those having medical responsibility for the treatment of the claimant.

The above position has been strongly criticized by some individual clinical psychologists and by several state and local psychological associations.

The purpose of the present statement is not to argue the case nor to defend the position taken by BPA in 1960, but to indicate that the policy, right or wrong, has stimulated a great deal of interest, much of it critical, and that BPA will consider the matter again at its spring meeting in 1961. It should be made clear that reconsideration by BPA will not necessarily result in a change in the recommendation unless the board feels that there is good reason for doing so. There is no desire on the part of BPA to try to prove that it was right a year ago if in fact it was wrong, and BPA is per-

fectly willing to change its position if it now appears desirable. The board is equally desirous of not being wrong in 1961 merely because it has received criticisms for what it did in 1960. The membership can be assured that the problem will be carefully and objectively re-evaluated in the context of reactions which have been received from individual psychologists and groups of psychologists.

In connection with this matter, it is desired, also, to correct three erroneous impressions that were created in the pages of the *American Psychologist* in the reporting on the insurance problem. The crux of the matter lies in the fact that S. Rains Wallace is both a member of BPA as well as Chairman of an ad hoc committee to investigate the problem of insurance coverage for psychological services. The other members of this ad hoc committee are: Harry Bone, Stuart W. Cook, Rollo May, Edward Joseph Shoben, and Albert S. Thompson. The committee was created by BPA to investigate some of the problems of the policies and practices of insurance companies; Wallace was made Chairman because of his knowledge and competence in this area. As a matter of fact, the committee has not met as a group. However, Wallace was able, through his knowledge of the field and his relationship with key persons in the insurance industry, to give BPA what it felt to be a clear statement of the insurance problems faced by psychologists. Therefore, the policy position quoted above was taken by BPA on the basis of Wallace's reports to it, with full knowledge that the committee had not met and that it was not endorsing a committee report.

Nevertheless, the phrasing of a reference to the policy on page 677 of the *American Psychologist* for October 1960, in the "Psychology in the States" column, could give the impression that BPA was dealing with a committee position and not merely the report of one of its own members. We wish to correct this erroneous impression.

The matter was further compounded in the *American Psychologist* for December 1960, which indicated that the Board of Directors had adopted the position taken by BPA in the insurance mat-

ter and that it had instructed the Executive Officer to publish "the report of the Chairman of the Ad Hoc Committee to Investigate the Problems of Insurance Coverage for Psychological Services" (p. 762). In the same issue of the *American Psychologist*, the report in question appears, beginning on page 824. The italicized material introducing the article again identifies Wallace as "Chairman of an ad hoc committee to investigate the nature and extent of coverage provided for services rendered by psychologists under health insurance plans." Further reference is made in the body of the report to the ad hoc committee and its continuing efforts to deal with this problem. Hence, once again the impression is given that the ad hoc

committee was collectively responsible for the report, which in fact was not the case.

Some members of the ad hoc committee have clearly indicated that they are not in agreement with the content of the report published in the *American Psychologist*; others have not made any protest; and since one member is out of the country, his position is unknown. The board does not wish to attribute attitudes or beliefs incorrectly to members of its committees, and this series of three unfortunate editorial misadventures in the reporting of the insurance problem is regretted by BPA.

—JOSEPH M. BOBBITT

Chairman

Board of Professional Affairs

Comment

More on Undergraduate Degrees

Since the publication of figures taken from the *Statistical Abstract of the United States* in the *American Psychologist* (1957, 12, 229-230), the writer received a number of requests for reprints which were not available. In order to satisfy these inquiries and to make the data more helpful, he has extended the table, which originally included only the years 1949-54, up to and including 1958 (see Table 1). In the original Comment, the writer speculated on the reasons why the number of undergraduate degrees in psychology had dropped from 1950 to 1954. To the advocates of un-

TABLE 1
NUMBER OF DEGREES AWARDED IN PSYCHOLOGY

	Bachelor			Master			Doctorate		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1949	8205	4591	3614	1455	889	566	201	167	34
1950	9582	6058	3524	1316	948	368	283	241	42
1951	7819	4836	2983	1645	1250	395	425	368	57
1952	6622	3783	2839	1406	1066	340	540	467	73
1953	5946	3330	2616	1161	896	265	583	504	79
1954	5758	3085	2673	1254	885	369	619	553	66
1955	5532	3009	2523	1293	876	417	688	604	84
1956	5665	3108	2557	973	690	283	634	548	86
1957	6191	3525	2666	1095	763	332	550	460	90
1958	6930	4063	2867	1235	836	399	572	488	84

Note.—UNITED STATES BUREAU OF THE CENSUS. *Statistical Abstract of the United States*. 71 ed., p. 128; 72 ed., p. 124; 73 ed., p. 128; 74 ed., p. 131; 75 ed., p. 139; 76 ed., p. 131; 77 ed., p. 131; 78 ed., p. 130; 79 ed., p. 130; 80 ed., p. 129; 81 ed., p. 129.

dergraduate specialization in psychology, it will be reassuring to note that the bachelor or first level degree, in point of numbers of men and women receiving it, has been on the rise ever since 1955 when it reached its lowest point. The number of master or second level degree recipients reached its lowest point in 1956 and has also risen since then but has not approached the peak year of 1951. The number of doctorates awarded since 1952 has remained more constant, especially since 1952, than the numbers receiving the first and second level degrees.

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Professional Ethics: Another Look¹

It was in 1943 that the APA gave serious thought to codifying ethics, but not until 1947 that the Committee

¹The author wishes to thank Francis H. Deter and Nicholas Hobbs for their kind suggestions and encouragement.

on Ethical Standards for Psychology was appointed to draw up a code of ethics (Hobbs, 1948). Provisional adoption of the manual entitled *Ethical Standards of Psychologists* came in 1952, and a revision of this original document has recently been accepted for a trial period of 3 years (APA, 1959).

It is herein proposed that this abbreviated, watered down, revision is no improvement on the original. It remains highly possible that the need for a revision is not perceived by most psychologists. It is further suggested that the proposed revision is a trend toward greater abstraction that may only serve to engender ambiguity and individual latitude—a trend away from Hobbs' (1948) original recommendation that "the code should be formulated in specific terms."

This briefer version lacks the precision of the original manual. The codes are the result of empirical research and should remain so if they are to be of any practical guidance to the profession. It seems questionable that any trend toward abstraction serves the practical need for illustrative guidance that only raw, substantive, operational, anecdotal incidents, such as those contained in the original formulation, offer. As was recognized by Hobbs, the manual, because of the deletion of the "incidents," i.e., citations of violations, veers significantly from its original intent of empiricism. The 1952 codification embodies the virtues of both the abstract (general principles) and the concrete (illustrative incidents).

In actual practice the original version has already received wide acceptance, and tacit endorsement, because of its proven utility. In fact,

when the revised and shortened version of the ethical code was adopted in 1959, the Council of Representatives specifically stated that the earlier and larger manual and casebook were still to be considered part of the basic code for purposes of defining ethical violations and proceeding under the conditions of the code (Darley, 1960).

Dissatisfaction with the original formulation has been attributable to two main characteristics (APA, 1958): length and overinclusion. In an effort to remedy this defect, however, the revision seems to move to the opposite extreme of undue brevity and overexclusion. A "body" of codes condensed to fill no more than a dozen pages seems of questionable usefulness.

The decision to move in the direction of "core ethical issues" seems wise. Yet even here we should proceed with caution. Some among us are still somewhat impervious to observing even the simple "niceties and courtesies" mentioned by the 1955 Committee on Eth-

cal Standards (APA, 1958). For instance, many of us have had the experience of patiently listening as a lecture degenerated into a tirade extolling the virtue of Dante's Inferno as a suitable abode for a fellow psychologist whose views differed from those of the speaker. This discourtesy certainly could not pass as sound ethics. At any rate, whether they are matters of core ethics or simple courtesies, overlapping and controversial issues are best examined operationally.

It seems evident that only refined empirical "incidents" fulfill this operational criterion and that the absence of such factual illustrations in any revised manual impedes the process of operational reductionism from general principles to concrete, definitive situations. The major task is to refine empirical citations (references) by removing ambiguity, uncertainty, and controversy. "The catch word which fully captures the meaning of a complex ethical issue" is found at the "incident level" more readily than at the "general principle" level. Communication improves when one can cite specifics. As the proposed revision now stands, i.e., without illustrative "incidents," this process of operational reduction to basic "referents" can only be inconclusive.

PROPOSAL

The problem of defining ethical behavior will always be with us. A changing profession, increasingly called upon to assume new functions—and one in which the lines between other behavioral sciences are thinly drawn—will continue to pose new issues not easily resolved or contained in any manual. Therefore, it is suggested that the APA seriously consider nominating an editorial board for a new *Journal of Professional Ethics in Psychology* to serve as a constant sounding board for the profession and the Committee on Ethical Standards.

We need but examine the literature to conclude that the time for such a journal is *now*. Consider only the increasing number of papers dealing with ethical problems published in the *American Psychologist* alone. Of

a total of 88 articles and comments on ethical matters in the *American Psychologist* for the past decade and a half 17% occurred in the first 5-year period of 1946–50, 46% in 1951–55, with 37% occurring in the last 5 years. The volume of literature in this area would amply support this new literary venture.

The first duty of such a journal is to the profession of psychology. Yet as numerous articles by many authors imply, the problem of ethics so extends to broader socioscientific values that the proposed journal need not be oriented toward the problems of housekeeping alone (Creagan, 1958). One cannot be so inflexible as to ignore the larger issues arising out of psychotherapy and prevention. But even here psychologists, experimentally and methodologically oriented, are well prepared to maintain the pragmatic, empirical approach.

The journal could well serve to implement some recommendations made by Hobbs, namely, that (a) "provisions be made for the continuous collection of case material illustrative of the codes" or that (b) "denote current practice in specific situations" and (c) the codes should be an outgrowth of research.

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Psychology in Action

THE RELATIONSHIP BETWEEN THE PSYCHOLOGICAL INVESTIGATOR AND THE PUBLIC SCHOOLS

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WHILE many of the institutes in this country which are exclusively devoted to the scientific study of the child often maintain child populations and facilities which are accessible for purposes of research, access to the children and facilities of other institutions, e.g., schools, hospitals, institutions for the disturbed, handicapped, retarded, etc., is frequently sought. In departments (or universities) which do not maintain child populations or appropriate facilities such resources are most often the only ones which are potentially available to the investigator whose research interests, at one time or another, require the participation of children. As a consequence, the schools, as well as other child-related institutions, become highly instrumental to the execution of research programs insofar as they assist and cooperate in arranging for the participation of their children in research and provide use of their facilities.

Although it is a rare public school system which is under any mandate to cooperate with the university investigator, it is a historical fact that the American public schools have been generally responsive to the investigator with child-related research interests. In many instances, the course whereby the investigator secures the necessary assistance and cooperation tends to run smoothly. In other instances, however, even though apparently sufficient thought and preparation have accompanied his efforts, rather profound complications can arise (Nettler, 1959).

According to impressions received from several recent reports (Brackbill, 1960; Chauncey, 1959; Murray, May, & Cantril, 1959) the Soviet psychologist interested in child-related research, due to the centralized nature

of the Soviet school system, appears to encounter little difficulty in conducting his research in the public schools. Because of the American public school's historical independence from centralized authority on the one hand and its increasingly complex and demanding pattern of responsibility to the local community on the other, research in the public schools is ideally based on a pattern of activity between the schools and the university investigator which tends to be best suited to the local situation. Although this pattern of activity appears to vary from one locale to another, there remain principal elements of communality (Baldwin, 1960; Bijou & Baer, 1960). While time and effort are required on the part of the investigator to maintain this relationship, the process of securing assistance and cooperation often poses difficult problems especially for the investigator whose research interests do not consistently require the participation of children. In effect, this investigator is often at a disadvantage in that, at the time the need for cooperation arises, he may not be completely aware of the specific policies currently maintained by the schools concerning participation of their children and use of their facilities for purposes of research.

While the schools are understandably receptive to proposals for research having apparent bearing on those problems which are of immediate concern to them, the fact that they have been receptive to a wide variety of research is frequently overlooked. The failure to give formal expression or recognition to this fact has been ably articulated by Mullen (1959). As this writer points out, schools, particularly if they are located close to a large or major university, are frequently beset with a wide array of requests from many different individuals representing many different departments to use their children and facilities for research. In fact, the obligation which the American public schools have come to assume for facilitating and cooperating in research initiated by other agencies is evident in the tendency, in many of the larger school systems, to assign to one of the administrative officials the additional task of reviewing, screening, and inquiring further into research

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proposals, as well as contacting principals, teachers, etc. to arrange for children and facilities. In this connection, the basic task of the administrative official is to review research proposals in order to assess their compatibility with the routine, regulations, practices, and responsibilities of the particular school system involved. A comparable reciprocating arrangement is hard to find in many universities.

In an effort to create such a reciprocating arrangement, a facility, designated the Office of Child Research, was recently established within the Department of Psychology at the University of Texas. This rather simple and flexible arrangement, in our opinion, incorporates many of the practices commonly employed by the psychological investigator with concerted and long-range interests in child-related research (Baldwin, 1960; Bijou & Baer, 1960). Consequently, we believe that public description of this facility will not only alert others to the problems involved but also serve as a basis for future planning.

Briefly, this facility functions as a liaison between the university investigator and the school or institution to which requests for assistance and cooperation to employ nonuniversity subjects and facilities are made. This function is implemented by an executive secretary (an educational psychologist) whose duties fall into six major categories which are described as follows:

Provides assistance to the investigator in the preparation of the research proposal. The basic nature of this assistance involves informing the investigator of current policies maintained by the schools or institutions regarding research and of the information that the proposal should contain in order that the reviewing official may determine the consistency of the request with these policies. Except for special cases, a standard form for the proposal has been found convenient. This standard form, which has been developed in consultation with school officials, requires the investigator to indicate briefly the basic characteristics of the problem to be investigated and to provide details regarding such factors as the number and description (age, sex, etc.) of the children required, the time required of each child and/or classroom teacher, what information may be needed from school records, the type of equipment to be used, physical facilities that will be needed, approximate starting and finishing dates, names of the research assistants involved, whether a follow-up study is intended, as well as a detailed description of what is to be required of the child by way of specifying the nature of the stimulation to be employed (questionnaire, sounds, pictures, nonsense syllables, etc.) and the behavior to be recorded (written answers, speed-of-reaction, etc.). The disposition of any given proposal is considered to be the function of the appropriate school officials and the major duty of the executive secretary

in this connection is that of anticipating points in need of clarification so that the necessity of additional inquiries on the part of the reviewing school officials is minimized.

Submits the research proposal. The proposal is submitted by the executive secretary to the appropriate school officials and either by written or oral communication provides any additional information concerning the proposal upon request. The investigator is consulted and kept informed at all points during this stage of his request.

Inform the investigator of the disposition of his proposal and assists in preliminary arrangements. The school official communicates his decision to the executive secretary who, in turn, informs the investigator. When the proposal is approved the official also informs the executive secretary of the school most appropriate for the purposes of the study and the names of the persons in that school to be contacted and whom he has previously informed. The executive secretary then arranges for an appointment for the investigator, or the research assistant who will conduct the study, with the principal of the school involved. If the assistant has not previously conducted research in the schools, the executive secretary accompanies him for this initial meeting. At this meeting the starting date is set as well as the classrooms to be involved and the procedural and scheduling aspects of the study are reviewed. Contact with the progress of the investigation is continually maintained and where procedural modifications become necessary, assistance in all further necessary arrangements is provided so that the investigation may continue with minimal delay to the investigator and minimal disruption of the school's routine.

Reports to the school. Upon completion of the study a request is made of the investigator for those findings or ancillary observations which may be of immediate interest, value, or significance to the cooperating school. Information of this type is reported to the schools as soon as it is available and the results of any particular investigation are eventually reported back to the schools either by way of reprints or a preliminary report of the findings.

Reciprocal services. An important function of the executive secretary is that of providing, either directly or by arrangement, specialized psychological testing services to the cooperating schools. If the testing that is requested is such that it cannot be performed by the executive secretary, arrangements are made for either a departmental staff member or graduate assistant to conduct such tests. Special effort is made to maintain information regarding local agencies, professional personnel, etc. to which the schools can refer those children in need of specialized psychological attention.

Maintains records. In addition to maintaining information on all matters relating to the receipt and dis-

position of proposals, other information of potential value to the investigator is also maintained. The latter includes a description of all geographically convenient institutions maintaining child populations with special reference to such matters as the current size of the child population, range of cultural background, special abilities or disabilities, etc.

As implied earlier, many of the aspects of this facility have evolved from the experiences of psychological investigators in their efforts to develop mutually satisfying relations with the public schools. We believe that such a facility or others comparable to it can facilitate the needs not only of the investigator with predominant interests in child-related research but any investigator whose research only occasionally requires the participation of children. Indeed, a clear impression of the rather wide range of psychological research for which children are employed as subjects can be gained from the fact that in the 2-year period, 1958-59, a total of 162 articles reporting the use of children (nearly 43,000) appeared in five APA journals representing outlets for a rather broad spectrum of investigation. These particular journals, along with the number of articles reporting the use of children, were *Journal of Abnormal and Social Psychology* (48), *Journal of Comparative and Physiological Psychology* (23), *Journal of Consulting Psychology* (35), *Journal of Educational Psychol-*

ogy (39), and *Journal of Experimental Psychology* (17). Finally it should be pointed out that this listing excludes those many journals which deal almost exclusively with child-related research, e.g., *Child Development*.

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AMERICAN BOARD OF EXAMINERS IN PSYCHOLOGICAL HYPNOSIS

RECENT increased interest in the clinical and experimental applications of hypnosis has brought to the forefront the problem of competency in working with this psychological process. Historically, hypnosis has had periods of boom and bust. High interest has usually been followed by overenthusiasm and undisciplined use (Marcuse, 1959).

The older view of hypnosis as a simple matter of suggestion has long since been abandoned by the informed worker in this field. Today, we know that hypnosis involves the most complex psychological processes, and the most sophisticated theoretical considerations are necessary to explain it (Kline, 1958). Moreover, present study in hypnosis inevitably involves the clinician or scientist in the entire areas of interpersonal relationships, perceptual and learning processes, problems of motivation, and personality theory (Le Cron, 1952; Schneck, 1954; Weitzenhoffer, 1953).

Twenty-seven years ago Clark Hull (1933) was severely censured by his psychological colleagues for publishing a book on research in hypnosis. Attitudes are changing. Today, active research and instruction are going on in such university centers as Stanford, University of California at Los Angeles, Washington State, Long Island, Michigan, Minnesota, Kentucky, and other

departments of psychology, as well as in a number of medical and dental schools.

As experimentalists and personality theorists become acquainted with these studies there may well be a heightened interest among all psychologists in the nature of the hypnotic state (Weitzenhoffer, 1957); the perceptual and motor transformations which can be elicited within it (Dorcus, 1956; Kline, 1955); the significance of the hypnotic relationship in psychotherapy (Gill & Brenman, 1959; Watkins, 1949); and the possibilities for using hypnotic controls in studies on learning, motivation, and perception (Reiff & Scheerer, 1960).

In 1949, a small group of psychologists and psychiatrists banded together to form the Society for Clinical and Experimental Hypnosis (SCEH). The *Journal of Clinical and Experimental Hypnosis* (since January 1959, the *International Journal of Clinical and Experimental Hypnosis*) became its official organ and published research articles from both American and foreign contributors. In 1957, SCEH established a research and training branch, the Institute for Research in Hypnosis, which was chartered as an educational and scientific foundation in the State of New York and made responsible to the New York State Commissioner of

Education through the Board of Regents of the University of the State of New York. Within this institute instructional courses in hypnosis have been given, and a number of books and monographs published.

The International Society for Clinical and Experimental Hypnosis (ISCEH) was organized in 1958 with national division organizations in 24 different countries. SCEH became its United States Division. These societies are composed of reputable, scientific workers from the three disciplines of psychology, medicine, and dentistry. This international society was established to provide a forum within which scientists and clinicians could exchange experiences on a world-wide basis. Its aim was to secure higher standards of training, practice, and research in the field of hypnosis. In October 1959, ISCEH was accepted as an Affiliate of the World Federation for Mental Health, and also became a member of the Union of International Associations.

SCEH and ISCEH were organized on a fundamental premise: namely, that sound clinical practice must be based on good research, and that it is wise to maintain effective communication between the scientific investigator and the clinical practitioner. Within these societies the three disciplines, psychology, medicine, and dentistry, have held coequal status and have maintained cordial interprofessional relationships.

The Council on Mental Health of the American Medical Association (1958), following an intensive study of the medical uses of hypnosis, released a report approved by their Board of Trustees and House of Delegates. This report affirmed the legitimate use of hypnotic techniques in the practice of medicine and recommended that medical schools provide training in hypnosis. Two psychologists were among the nine consultants called upon by the AMA Council on Mental Health for assistance during its study of the problem.

The uninformed and careless use of hypnotic techniques is attendant with the same hazards which exist in intensive psychotherapy, or in the employment of any interpersonal relationship process during research studies. In addition, because hypnosis involves a centralist penetration of personality, certain unique precautions may be required. It is possible that harm can be done. There seemed to be a need for some type of high level accreditation.

In 1958, SCEH with the "consent" of the New York State Commissioner of Education incorporated, through the good offices of the Institute for Research in Hypnosis, the American Board of Clinical Hypnosis.

Roy M. Dorcus, Professor of Psychology and Dean of Life Sciences at UCLA, was named as its first Chairman. He was succeeded in October 1960 by Jacob H. Conn, Associate Professor of Psychiatry at Johns Hopkins University Medical School.

Included within the American Board of Clinical Hyp-

nosis were three subboards, collaborating, but functioning independently of each other: American Board of Medical Hypnosis, American Board of Hypnosis in Dentistry, and American Board of Examiners in Psychological Hypnosis. Although not connected with the American Medical Association, the American Dental Association, or the American Psychological Association, it was the clear intent and purpose of these boards to integrate their procedures, through all possible cooperation, with the policies of AMA, ADA, and APA.

Hypnosis is not an independent discipline. Hypnotic techniques represent a body of skills and understandings which are useful to the dentist, the physician, and to both the research and clinical psychologist. Accordingly, these three specialty boards (medical, dental, and psychological) have undertaken to evaluate only the training and experience of clinicians and scientists for using *hypnotic* procedures in their respective disciplines and to issue certificates to those who meet certain standards of qualification.

These boards did not propose to infringe upon, nor to compete in any way with, the already organized accreditation agencies such as the various medical and dental specialty boards or the American Board of Examiners in Professional Psychology. Thus, the American Board of Examiners in Psychological Hypnosis (ABEPH) would not undertake to evaluate the clinical competence of an individual, but would study the ability of a psychologist, already recognized for his clinical abilities, to use hypnotic techniques within his chosen field of endeavor.

In November 1959, the Board of Professional Affairs of APA, after considerable study of the situation, issued the following report:

B. Practice, Teaching, and Study of Hypnosis by Psychologists.

On the basis of further information, gathered since its September meeting at which the issue had first been raised, BPA paid renewed attention to the problems encountered by psychologists in the practice, teaching, and study of hypnosis. The board noted with satisfaction the high-level inter-disciplinary program of the Society for Clinical and Experimental Hypnosis as well as the ABEPP-like standards of the American Board of Examiners in Psychological Hypnosis. While BPA initially expressed concern over the certification of a technique as such, it felt reassured by the emphasis placed on full professional training by the Society and ABEPH, which evidently regard competence in hypnosis as part rather than whole.

In view of the high standards of training and competence represented by the diploma of the American Board of Examiners in Psychological Hypnosis, it was voted by BPA that APA members who are ABEPH Diplomates be appropriately listed in the APA Directory beginning with the 1961 edition.

In June 1960, after review and consideration of certain objections raised, the APA Board of Directors

voted its approval of the BPA Report and recommended it to the Council of Representatives. On September 2, 1960, the APA Council of Representatives unanimously approved the recommendation of this Report calling for listing of ABEPH Diplomates in the APA *Directory*.

During its initial "grandfathering" period some of the formal requirements (as is customary with certifying boards) were waived by ABEPH in cases where a candidate had other, but equivalent, qualifications in the judgment of the board. Two types of Diplomas were issued by ABEPH: in Clinical Hypnosis and in Experimental Hypnosis.

It was considered desirable that the ABEPH Diplomas not be confused with those granted by the American Board of Examiners in Professional Psychology, and also that the requirements for certification in Clinical Hypnosis guarantee adequately evaluated, *general* clinical competence. Since ABEPH does not evaluate clinical skills *per se*, and ABEPP does, an amendment was proposed at the September 6, 1960 meeting of the APA Council of Representatives which would require that future applicants to ABEPH for the Diploma in Clinical Hypnosis should be holders of ABEPP Diplomas. This amendment was unanimously adopted.

REQUIREMENTS FOR CERTIFICATION

All applicants:

1. Membership in APA
2. Possession of the PhD (or equivalent EdD) degree
3. Agreement to adhere to the published Codes of Ethics of APA and SCEH

For the Diploma in Clinical Hypnosis:

4. Possession of an ABEPP Diploma (Clinical or Counseling)
5. Five years of acceptable experience in clinical hypnosis

For the Diploma in Experimental Hypnosis:

4. Significant research publication in the field of hypnosis
5. Five years of acceptable experience in experimental hypnosis

During the year 1961 formal written and oral examinations will be waived in the case of applicants otherwise qualified. This "grandfathering" provision expires after December 31, 1961. The other requirements are no longer subject to waiver. A fifty-dollar (\$50) evaluation fee is required on submission of the application. The services of ABEPH are open to qualified psychologists who can meet the above standards of certification. Applications should be sent to the board at the following address: American Board of Examiners in Psychological Hypnosis; 33 East 65 Street; New York 21, New York.

ABEPH DIPLOMATES AS OF MARCH 1, 1961

CLINICAL HYPNOSIS

John J. Brownfain	Harold Lindner
Milton Brutton	Frederick L. Marcuse
Harold B. Crasilneck	Earl D. Markwell, Jr.
Roy M. Dorcus	Hamilton Mark Moody
Albert Ellis	C. Scott Moss
Volney E. Faw	Bernauer W. Newton
Howard Friedman	Seymour H. Schpount
Samuel Glasner	G. Wilson Shaffer
Henry Guze	Jack Tracktir
Frank J. Kirkner	John G. Watkins
Milton V. Kline	Andre M. Weitzenhoffer
Leslie M. Le Cron	M. Erik Wright

EXPERIMENTAL HYPNOSIS

Sylvia Brecher-Marer	William S. Taylor
W. D. Furneaux	Warren W. Wilcox
Robert Reiff	Griffith W. Williams

* * *

AMERICAN BOARD OF EXAMINERS IN PSYCHOLOGICAL HYPNOSIS

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Psychology in the News

Without a Dowd . . .

From time to time there runs through our head a beautiful refrain to a doleful ballad—a folksong nonetheless poignant although no folk but our family has ever sung it. “Say Goodbye to Bellevue, Mother, They’re Burning Tests in Texas Once Again.”

An all-out attack on multiple-choice tests was the featured article in the March *Harper's Magazine*, and by the time you read this the name of Banesh Hoffmann, the author of the denunciation, will no doubt have been heard from one end of psychology to the other. (And very likely the ends will one day meet here in *AP*.) *Harper's* gave over half of its cover and the number one position in the magazine to the Hoffmann piece, “The Tyranny of Multiple-Choice Tests.” The article opens with the following blast at “the testers”:

There is no escaping the testers with their electrical scoring machines. They measure our IQs at regular intervals and assess our scholastic achievement throughout our school days. They stand guard at the gateway to National Merit Scholarships, and they tell admissions officers how many points worth of college aptitude we possess. They pass on our qualifications for graduate study and entry to professional schools. They classify us *en masse* in the Army. They screen us when we apply for jobs—whether industry or government. They are even undertaking to certify our worth when we come up for promotion to positions far outranking their own.

The nation, in short, is placing enormous reliance on machine-graded multiple-choice tests as a measure of ability. But, unhappily, it can be shown that they have grave defects. Our confidence in them can have dangerous consequences, not only for education but for the strength and vitality of the nation. The whole question of multiple-choice testing needs thorough reexamination—and it is not getting it.

From there Hoffmann details how large a business this has become, and for some reason he seems particularly impressed that “some of the test publishers employ traveling salesmen to promote their wares.” (Would Hoffmann be shocked to know that Harper & Brothers today employs drummers who go from city to city?)

After mentioning those he considers the big five—ETS, SRA, Psychological Corporation, California Test Bureau, and the World Book Company—Hoffmann for most of the article examines specific test items. He is quite critical of the National Merit Scholarship tests items, and quotes from an unfavorable review of them in *Buros' Fifth*.

His indictment against the tests goes like this:

The tests deny the creative person a significant opportunity to demonstrate his creativity, and favor the shrewd and facile candidate over the one who has something of his own to say.

They penalize the candidate who perceives subtle points unnoticed by less able people, including the test-makers.

They are apt to be superficial and intellectually dishonest, with questions made artificially difficult by means of ambiguity because genuinely searching questions do not readily fit into the multiple-choice format.

They too often degenerate into subjective guessing games in which the candidate does not pick what he considers the best answer out of a bad lot but rather the one he believes the unknown examiner would consider the best.

They neglect skill in disciplined expression.

They have, in sum, a pernicious effect on education and the recognition of merit.

His proposal for clearing up the situation goes like this:

One solution to this dilemma could be the formation of a completely independent board of eminent educators and scholars which could have access to the whole range of questions produced by the testing organizations. Committee members could examine the actual tests and the statistical evidence concerning them, consult with experts and their critics, and form an opinion as to the real worth of current tests. The scope of their critique should extend far beyond the technical reviews of tests now published in the *Mental Measurements Yearbooks*. The committee could open up the question whether the multiple-choice format is really suited to measuring the various kinds of ability tested today. If they found the tests wanting, they might recommend alternative approaches to testing to supplement or supplant the multiple-choice method.

Hoffmann suggests that only a minority of such a committee should consist of test psychologists or professional test-makers. He suggests appointments from the National Academy of Sciences, the American Council of Learned Societies, and the Modern Language Association.

Most test psychologists would probably agree that Mr. H. makes some excellent critical points. Doubtless they would not agree that test-makers are not disturbed by criticism, and his implication that they do none of this sort of thing themselves.

Instead of banishing (cq) testers to a minor role on this board of inquiry, our own suggestion would be merely to subdivide the panels so that competitors were asked to pass upon each other's tests, and point out whatever loose boards they thought they found. Then, indeed, one would wish for persons not all bound up in testing to assist in referee work, supposing this unlikely inquiry should ever come to pass.

One thing remains completely mysterious about this “tyranny,” so far as the scope of Hoffmann's

article goes: there is no good word whatever to explain *why* these sinister things are so popular with those educators in whom we place so much responsibility for guidance of our youth—and hence our future. Supposing that the testers are tyrants, granting all that is said, one expects to find in a really complete survey article on tyrant Castro or tyrant Hoffa some inkling of what his constituency is getting, or imagining it gets. What were the Cubans or the teamsters getting out of life before their current tyranny, and what are their alternatives? What do the Cubans or educators *think* they are doing? If we were to burn all our tests in one big Texas barbecue, after that revolution, what? What “alternative approaches”?

In the immortal words of Elwood P. Dowd, in the play *Harvey*: “Just what did you have in mind?”

Cornucopia—Spelled Sideways . . .

Until corrected, this department believes *Pag-cant* magazine has hung up an all-time record for alleged communication of alleged psychology, in its issue of January 1961.

Out of four articles featured on the cover, three obviously lie within our domain—and our verbs are carefully chosen. Ready—brace yourself!

IS YOUR MAN A SEX ILLITERATE?
YOU CAN RAISE YOUR CHILD'S I.Q., AND YOU'D BETTER!
9 Tested Ways: HOW TO CONTROL YOUR NERVES.

The man at the next desk, who has looked over to read the titles, apparently has never heard of any of these nine tested ways. Perhaps—with his nerves—he is also a market for the fourth item to be klaxoned in this klatch of copious cornia. Item 4, not in our domain, is Minnesota Doctor's HOME CURES FOR WINTER MISERIES; and sure enough, this “old-fashioned family doctor” urges the reader to “Fight Colds With Mental Measures.”

The IQ article has this fascinating chain of reasoning:

1. IQ scores are considered vitally important! in charting a child's education.
2. IQ scores *do* vary, some more dramatically than others.
3. Almost anything can cause this change.

The three facts lead irresistibly to the possibility that parents can deliberately and favorably influence the score their child makes on his next intelligence test.

From the viewpoint of a semantic engineer, one can only admire this last phrase. Indubitably it may be powerfully postulated that scientists themselves are often intrigued to the point of being irresistibly led to a possibility. Later, alas too often,

they may be led away. But forward! Dragnet wants facts, and statisticians want relative frequencies; but people, it appears, love possibilities—and particularly they love them in the form of their children.

Nothing in the lines or between the lines above is to be construed as implying that a person's scores on IQ tests may not vary, nor are these lines written by someone opposed to possibilities—or pag-eants, for that matter.

For More Research . . .

A new note appears in the eloquent advertising of the National Organization for Mentally Ill Children. Under the headline, **HELP BOBBY LOVE HIS MOTHER**, and the photograph of a boy, the advertisement begins:

Bobby has a near-genius I.Q. Yet six bitter, tragic months have passed since he uttered a complete sentence to another human being.

Bobby is sick. He is mentally ill. He cannot accept human love. Nor can he give it.

No one knows what causes children like Bobby to become mentally ill, to turn in fear and bewilderment from parents who love them . . .

Later the text strikes a more confident note, and says that professional help and time and money can bring back children like Bobby, and speaks of the work of this organization which has as a main goal: “to create action for decent facilities for mentally ill children in every community.”

A Perceptual Price . . .

It used to be that most news stories using the word psychology in the headline turned out to be something about a sales manager exhorting his disciples: “You gotta use psychology on ‘em!” The United Press International apparently went back to this for a story widely printed under heads like this: **PSYCHOLOGY HELPS TO CUT COSTS**. The first sentence said “Psychology gradually is becoming a byword in the business world.” Of course that is so, but the rest of the story was about pasting “perpetual price labels” on machinery. The labels say something like this: “The replacement cost of this machinery is \$000.00, use it with care.”

The story further claims that use of these has already saved industry \$100,000,000. No mention is made of what survey shows all this effect and cost. If any reader knows of such, please write. There is no need to use air mail, we will not hold our breath awaiting the documentation of this application.

—MICHAEL AMRINE

Psychology in the States

Town Meetin' Tonight!

It would be more comfortable for us to function with absolute privacy—with the knowledge that we need never face a parent with what we have said on the record for others to read. It would also be more comfortable if the courts would grant psychologists "absolute privilege," making us immune from libel suits regardless of the truth or falsehood of our statements. *We have no right to these comforts.* Having chosen the profession of psychology, we have assumed certain professional responsibilities and certain professional risks. The law affords us a great deal of protection when we function professionally, but we cannot function in a vacuum where we are responsible to no one.

Trachtman speaking . . . Gilbert M. Trachtman, President of the Nassau County Psychological Association writing not *for* NCPA but *to* NCPA, which, like NAACP, is concerned as much with writing rights as with righting wrongs. For all their forthrightness, the words in the Nassau County newsletter "From the Pen of the President" might well have come out of a New England town hall on a snowy February night:

Before psychologists demand more freedom and less responsibility, we must be certain that we are truly concerned with the welfare of the child and not the comfort of the psychologist.

There are more popular messages, and President Trachtman knows it. But apparently he was interested neither in currying the favor of nor burying the flavor of his local association which devotes the whole issue of a recent newsletter to the implications of a ruling by the New York State Department of Education that school records of children are open to inspection by parents.

The NCPA newsletter speaks of a "heated meeting," of "sharp debate," and of "passion generated." It recounts how two officers of the State Department of Education exchanged views with the NCPA Executive Board and how psychologists on each side of the thorny issues reacted.

Somehow one is left with the comfortable feeling that psychologists (who are parents too, we remind ourselves) shrink not from facing issues, nor from speaking out, nor even from being overheard while they are about it.

* * *

And That is Good. Yes, it is good, because we do not have all that much to say anyway about how

we get written about. Only the data gatherers among us really know; fortunately, they are willing to tell. How, for example, are psychology and psychologists reported in the newspapers of, let us say, Ohio? We just happen to have with us such an account, prepared by John Michael, Public Information Chairman of the Ohio Psychological Association.

Tabulated, and arranged à la *Psychological Abstracts*, Newsman Michael's sample of 100 Ohio newspaper clippings in which there is reference to one or more psychologists looks like this:

CONTENT CATEGORY	NUMBER OF ARTICLES
General Psychology	6
Physiological Psychology	0
Perceptual Processes	3
Response Processes	1
Complex Processes	18
Developmental Psychology	7
Social Psychology	10
Clinical Psychology	3
Behavior Deviations	23
Educational Psychology	13
Personnel Psychology	3
Industrial Applications	13

No normal curve this, but an interesting distribution for a' that. The rank of 1 for Behavior Deviations comes as no surprise; that of 2 for Complex Processes does. The high-ranking Educational Psychology is perhaps expected in this school conscious era; the popularity of Industrial Applications, on the other hand, is notable; the concern with Social Psychology even more so. If the Ohio figures are any indication, it, the press, may gradually be taking us, psychology, to be its lawful wedded science not only in sickness but in health as well.

The marriage is hardly common law, the Michael data suggest. Of 115 references to psychologists, 85 are to APA members, only 30 to nonmembers. And, in the bargain, the Ohio press is far from provincial: 46 of the 85 APA-ers are actually non-Ohioans. All in all, a pretty fair shake on the face of it.

* * *

Four Score and Three Certificands Ago. That was the time the Oregon Psychological Association had no data on the activities of the practising psychologists; now it does. Under the chair-

manship of David S. Brody, the OPA Board of Examiners recently undertook a survey of the private practice activities of its 83 certified psychologists. Here are some of the things it discovered:

1. 49% of these practising psychologists identify themselves as clinical psychologists, 51% identify themselves otherwise.

2. Of this total group, 36% indicate they spend no time at all in private practice.

3. Among those who do engage in private practice, the mean number of hours per week devoted to such practice is 6.5. About half of this group, however, spends 4 hours or less in private practice weekly.

4. Only four psychologists indicate they spend as much as 17 hours or more per week in private practice.

5. The group provides consultation to a wide range of organizations, agencies, and industrial concerns, both nationally as well as locally.

6. Clients come from diverse quarters, but the most likely source of referral is a physician.

7. When psychologists refer clients, it is most often to a physician.

We shall let the facts speak for themselves. In fact, perhaps the most important fact is that the psychologists of Oregon are less interested in proving points than in raising them. Research feeds on research, and a newly established ad hoc committee, under the chairmanship of Arthur N. Wiens, now asks: Who are the psychologists in Oregon? Where are they? What are they doing?

This time they mean *all* Oregon psychologists who are members of APA and/or OPA. And apparently they intend to find out, for the questionnaire to be used in the survey threatens to leave respondents with as little secret information as the application blank for a mortgage loan. The 27 questions begin with vital statistics and end with total net income (the latter to be reported anonymously). Somewhere in between, the researchers get at everything from education, work history, and journal subscriptions to what keeps members from attending conventions, which hobbies they pursue in their spare time, and how happy they are in psychology.

Once upon a time there was another OPA. As we recall, it proved to be the dog everyone kicked in those hectic years. In contrast to USA's OPA, fixing prices on the market, we now have APA's OPA, fixing sights upon the members. Chances

are that few will see creeping socialism here, that many will regard this enterprise as free, its motivation as pure.

Like Father, like Son. Never one to take a back seat, the New York State Psychological Association has recently trotted out a survey of its own. Like all things in the Empire State, it is big, new, and altogether impressive. Doing what comes naturally in these education centered times, NYSPA had commissioned a report on the evaluation of practicum training facilities. Norman I. Harway and his committee of the NYSPA Division of Clinical Psychology have delivered on their promise.

The report, which Harway modestly calls "a preliminary gathering of data," reads like something out of APA's own Education and Training Board. It comes equipped with five tables summarizing data collected between 1958 and 1960 from the 6 APA-approved New York graduate training programs and the 50 practicum and/or internship centers used for their students. The Harway committee got at many things: courses required, purpose of assignment to particular facilities, liaison between university and training institution, patient population, services rendered, and nature of supervision, among others.

Concludes Chairman Harway for the committee:

... One recommendation which stems from the knowledge that changes continue to take place both in the universities and in the training institutions is that the Division of Clinical Psychology of the New York State Psychological Association arrange for the continuing collation and evaluation of data regarding such changes. With the current flexibility—or is it capriciousness within the field(?)—a detailed continuing examination is well justified. A permanent Committee on Clinical Training should be established and should have sufficient time and funds to enable its members to make site visits.

Thus does New York cast its electoral votes on this early ballot.

* * *

The Wisdom of Youth. APA and its boards and committees have no truck with monopoly, still less with paternalism. Whenever they seem to, they can count on being brought up short by non-word-mincing members who shout, sometimes harshly, usually fairly, always with candor. That is how things go, and APA is glad of it. Indeed, counsel is sought, for the problems are hard, the solutions not easy.

That is precisely why the ad hoc Committee on

Mental Retardation, recently established by the Board of Professional Affairs, has asked us to announce that it is very receptive to, indeed eager for, suggestions from the membership. The committee, composed of Sidney W. Bijou, Rick F. Heber, William P. Hurder, Frances A. Mullen, and chaired by Rue L. Cromwell, grew out of the need felt by several APA divisions for focusing on mental retardation at an APA (cross-divisional) level. Its task intentionally unstructured, it stands ready to listen to messages from all who would send them.

The sender could be you. The mentally retarded, but for the grace of God, any one of us or ours.

* * *

And Still They Come. As if to prove that psychologists do respond, letters and reprints continue to arrive in answer to our expressed interest in the forensic activities of our colleagues. Here are some of the latest.

Unlike when the man bites the dog, chapters on psychological testing are normally not news. When they appear in the *Lawyers' Medical Cyclopedica of Personal Injuries and Allied Specialties*, however, they are. The chapter by William Schofield and Arthur J. Bachrach speaks of the contributions of psychology to legal testimony; the methods, purposes, and limitations of psychological testing; and the role of the psychologist as expert witness. The authors neither paint us and our contributions all white nor gild any lilies. They talk with frankness and without jargon and this, we suspect, is something lawyers, for all their legalese, appreciate.

Solomon S. Lieberman and Lawrence E. Abt, in turn, describe a forum on Psychologists' Testimony in Personal Injury Cases, presented at the fall meeting of the Practising Law Institute in New York City. Approximately 200 lawyers from various sections of the country paid \$25.00 for the privilege of attending the conference which included, among other events, a mock trial before a very real judge in which Lieberman, psychologist for the plaintiff, and Abt, psychologist for the defense, submitted to direct and cross-examination before the not unsophisticated group. The experience had its anxious moments, but, add our respondents:

Such was the warmth of the reception of Drs. Abt and Lieberman that they found they had to disabuse the attorneys of the notion of their omnipotence. . . . It would seem, from the readiness with which the psychologists' contributions to this Forum were accepted, that the Law is prepared to accept Psychology just as soon as Psychology is willing to be accepted by the Law.

From farther away, South Dakotan Walter T. McDonald describes two cases, in both of which his testimony as a psychologist figured and in one of which he was specifically asked to evaluate the defendant's acceptability for psychotherapy. Meanwhile, the fall program of the Illinois Psychological Association included a panel discussion of The Psychologist in the Courtroom, under the chairmanship of courtroom veteran A. Arthur Hartman and with the participation of not only psychologists but the Chief Justice of the Circuit Court of Cook County and the Director of the Psychiatric Institute of the Municipal Court of Chicago as well.

If apperceptive masses are handy things to build up, some psychologists seem to be developing them for the rest of us. Hopefully, when we others come to have our day in court, they will be able to tell us that E equals mc^2 without our having to try to discover it for ourselves (where E is erudition, m maturation, and c courtroom experience).

* * *

How Obtuse Can We Get? We have just laid out a triangle on the map, checked on our memory for geometrical terms, and come up with as obtuse a figure as cartographers could sketch on these United States. If just a little bit of heaven came from out the blue that one day Ireland was born, a lot of geography went into the coalition that other day when Mississippi, West Virginia, and Delaware combined to acquire a Joint Representative to the APA Council.

We know, because we were asked to draw lots on the order of succession. We did, and Delaware won, drawing the first 3-year term. West Virginia and Mississippi, in that order, drew future 3-year terms, indeed with a resigned cheerfulness reminiscent only of Burns's Willie, whom Rob and Allan came to see when he brew'd that peck o' maut. About our three state associations, to whom Council representation was at long last vouchsafed, we could only feel:

Three blyther hearts, that lee-lang night,
Ye wad na fand in Christendie.

—JOSEPH M. BOBBITT
Chairman

Board of Professional Affairs

ERASMUS L. HOCH
Administrative Officer
State and Professional Affairs

Notes and News

The American Board of Examiners in Professional Psychology, Inc. has scheduled its thirteenth Annual Written Examination for Friday, November 3, 1961. These examinations will be administered by Diplomates of the board, and centers will be established so as to be as convenient as possible for candidates. All eligible candidates will receive an official announcement of this examination and will be given an opportunity to select a convenient center. The written examination includes three sections: objective examination covering psychological knowledge basic to the specialty of the candidate; an essay examination measuring skill in the evaluation, interpretation, and use of research findings in the candidate's field of specialization; and a general essay examination dealing with the actual practice of the specialty. For further information concerning the work and functions of ABEPP, requirements for candidacy, and policies and procedures, write to the Executive Secretary: Noble H. Kelley; Southern Illinois University; Carbondale, Illinois.

Nominations are now being sought for the recipient of the first **Franklin V. Taylor Award** for outstanding contributions in the field of engineering psychology. This award was established by Division 21 (Engineering Psychology) of the APA in September 1960. It is planned to make the first presentation at the Annual Meeting of the division in September 1961. Membership in Division 21 is *not* a prerequisite for the nominee. The deadline for receipt of nominations is 1 July 1961. Nomination blanks may be obtained from the Chairman of the Award Committee: Leonard C. Mead; Tufts University; Medford 55, Massachusetts.

Prior to 1950 there was in existence a **Division of Physiological and Comparative Psychology** (Division 6). During the past few years many of us have discussed the desirability of resurrecting this division. The past decade has seen substantial growth in the area of physiological psychology and its branches (psychopharmacology, neuropsychology, ecology, etc.). Many new laboratories have

been created in this field, and more and more new psychologists find this field of primary interest to them. The interests of physiological psychologists are reflected in an independent APA journal, why not a division which would represent them in APA? Some 130 APA members have already signed a petition to form this new division. We would appreciate it if other interested members would contact: Sidney Weinstein; Department of Rehabilitation Medicine and Neurology, Albert Einstein College of Medicine; Eastchester Road and Morris Park Avenue; New York 61, New York.

Chairmen of the psychology department in liberal arts colleges who would be interested in an informal organization to discuss ideas and problems of mutual interest please send a card to: H. E. Klugh; Department of Psychology, Alma College; Alma, Michigan. An informal meeting at the APA Annual Convention will be arranged if there is reasonable response.

Joseph Weitz, of Richardson, Bellows, & Henry, represented the APA at the meeting of the Participating and Observer Organizations in the Fourth National Conference on Exchange of Persons in New York City on February 3, 1961.

Donald E. Swanson, of Hamline University, represented the APA at the inauguration of O. Meredith Wilson as President of the University of Minnesota on February 23, 1961.

Roland C. Davis, of Indiana University, died on February 23, 1961.

Dorothy E. Holland, of the Nebraska State Department of Education, died on February 20, 1961.

Oliver L. Lacey, of the University of Alabama, died on February 1, 1961.

Lawrence W. Miller, of the University of Denver, died on February 16, 1961.

Wayland F. Vaughan, of Boston, Massachusetts, died on January 21, 1961.

Morton Bard, formerly with the Memorial Sloan-Kettering Cancer Center, has accepted an

appointment as Assistant Professor of Psychiatry at New York Medical College; he will also serve as Chief of the Clinical Psychological Services at Flower-Fifth Avenue Hospital and at Metropolitan Hospital in New York City.

Harold P. Bechtoldt, of Iowa State University, on a Ford Foundation travel grant spent a week in January 1961 at the Psychometrical Laboratory of the Polish Academy of Sciences in Warsaw as lecturer and research consultant.

Emmett A. Betts has accepted the position of Research Professor in Education and Lecturer in Psychology at the University of Miami, Florida.

John A. Creager, formerly in the Personnel Laboratory of the Wright Air Development Division, is now Research Psychologist in the Office of Scientific Personnel, National Academy of Sciences-National Research Council, Washington, D. C.

Erwin Friedman, formerly at the New Jersey State Colony, has been appointed Chief Psychologist at the Children's Psychiatric Center, Inc., Eatontown, New Jersey.

Leon G. Goldstein, formerly in the Army's Human Factors Research Branch, has been appointed Chief of the Research Grants Section in the newly established Division of Accident Prevention, Public Health Service, United States Department of Health, Education, and Welfare.

Walter V. Clarke Associates, Inc. announces the addition to its Providence staff of **Jack G. Hutton** as Director of its newly opened Community Testing Center.

Bertrand Klass has been appointed Executive Vice-President and General Manager of Forbes Research Inc., New York City.

Bernard M. Kramer, formerly in the Massachusetts Mental Health Center, is now Assistant Professor of Preventive Medicine (Social Psychology) at the Tufts University School of Medicine.

Louis Long has been appointed Chairman of the recently constituted Department of Student Services at the City College of New York.

Wilbur C. Miller has been appointed acting Chairman of the Department of Psychology at the University of Denver.

Frank D. Millman, formerly with the Institute for Motivational Research, has been appointed Research Coordinator at Motivation Dynamics, Inc., Mohegan Lake, New York.

Elmer Morgan, formerly with the Lenawee County school system, has been appointed Assistant Professor of Psychology at Alma College.

Benjamin Pasamanick, of Ohio State University and the Columbus Psychiatric Institute, received the 1961 Stratton Award of the American Psychopathological Association for his studies on the epidemiology of mental disorder.

James D. Pearce, formerly at the Pittsburgh Child Guidance Center, has accepted an appointment as clinical psychologist with the Psychiatric Clinic of the Mount Zion Hospital and Medical Center, San Francisco, California.

Evan W. Pickrel has joined the staff of the Life Sciences Section, Douglas Aircraft Company, Santa Monica, California.

Martin Reiser has entered the part-time private practice of psychoanalysis in Philadelphia.

Edwin H. Sherman, of Business Personnel Consultants, Inc., has been appointed to the Editorial Board of the *Vocational Guidance Quarterly* for a term of three years.

During the year 1959-60 the American Civil Liberties Union received a bequest from the estate of **Ruth S. Tolman**.

An independent Department of Psychology has been formed at Western Washington College of Education:

Charles Harwood is Chairman of the new department; APA members in the department are **William Budd**, **Maurice Freehill**, **Elvet Jones**, **Evelyn Mason**, and **Edward Simmel**.

Henry Adams has also been appointed Chairman of the Honors Board of the college.

Paul Woodring continues on leave as a consultant for the Ford Foundation and has been appointed Education Editor of the *Saturday Review*.

Gordon Allport, **Jerome Bruner**, and **Neal Miller** will lecture on the nature of man in a series of one-week visits during the forthcoming summer session.

Julian Wohl, formerly with the Veterans Administration, has been appointed Assistant Professor of Psychology in the Department of Psychology at the University of Toledo.

Freedoms Foundation has awarded Rose Zeligs an honorarium and a George Washington Honor medal for her essay "Freedom Is a Growing Thing."

The following roster of officers has been announced:

San Diego County Psychological Association

President: Walter L. Wilkins
President-elect: Edmund E. Dudek
Secretary: Beverly F. Davenport
Treasurer: Paul Bruce

May 1, 1961 is the next closing date for applications for Fulbright Awards for university lecturing and advanced research in American republics, south and southeast Asia, and the Pacific area. Additional information and application forms are obtainable from: Conference Board of Associated Research Councils, Committee on International Exchange of Persons; 2101 Constitution Avenue; Washington 25, D. C.

The Postgraduate Center for Psychotherapy, in addition to its full-time Fellowship Training Program in Psychotherapy and Psychoanalysis, will have available for September 1961, part-time Fellowships for a few well-qualified postdoctoral psychologists. For further information, write to: Theodora M. Abel, Director of Psychology; PCP; 218 East 70 Street; New York 21, New York.

The United States Public Health Service has expanded its *Accident Prevention Program* to Division status, with a section devoted to the administration of research grants. Support will be available for a wide variety of research on causation and prevention of accidents: on the highway, in the home, and at play. Applications are accepted continually; evaluations are completed and awards made in March, June, and November. Write for information to: Leon G. Goldstein; Chief, Research Grants Section, Division of Accident Prevention; USPHS; Washington 25, D. C.

A Center for Study of Cognitive Processes has been established by the Department of Psychology at Wayne State University. The center will provide a mechanism for cooperative research,

will propose an integrated curriculum for majors, and will offer opportunities for research experience to holders of NDEA fellowships being awarded by the department. Eli Saltz has been appointed Director of the center.

The Ford Foundation has awarded a continuation grant to Goddard College for research on the behavior problems and the potentialities for constructive behavior of rural and small town youth in Vermont.

As part of a long-term program of structural analysis of sign language at Gallaudet College, the American Council of Learned Societies is sponsoring a study of visual communication among adult British deaf persons. The particular interest of this study is the relationship of British and of American sign language to national and regional dialects.

At the suggestion of Spearman, the 2 S Test was used by me in 1914 when isolating the perseveration factor (JONES, LL. W. *Rep. Brit. Ass.*, 1915, p. 698. SPEARMAN, C. *The abilities of man.* 1927, p. 295-298.). At that time Spearman did not know its origin. Many years later I discovered it in an American publication, but I cannot now recall it. As the test has been in use for over 40 years and has been wrongly attributed to several psychologists, *it would be desirable to know its author.* Those having this information, please contact: Ll. Wynn Jones; Collinwood, Tree Lane; Ifley, Oxford, England.

The Committee on High School Psychology of Division 2 has available for distribution bibliographic material which should prove most usable for those working with high school psychology groups in one way or another and those who have received smoke signals of distress from this high school group. This material is in two parts: (a) inexpensive but reputable library materials suitable for this level along with publisher and address; and (b) all articles, papers, surveys, etc. (that we could locate) on the topic of high school psychology. Incidentally, this is somewhat larger than might be expected. *This committee will be most happy to act as a clearing house for distribution of the bibliography,* mailing directly to the high school or sending the material to anyone who might be interested. In any event, here is a listing of sources which may fill many needs on the local level.—KENNETH E. COFFIELD, *University of Missouri.*

During the spring semester of 1960, a lecture series on *The Impact of Computers on Be-*

havioral Sciences Research was held at the University of Texas. The following lectures will be reprinted in the Spring 1961 issue of *Educational and Psychological Measurement*: "How to Tell Computers from People" (David R. Saunders), "Computer Solutions to Some Noncomputational Psychological Problems" (Robert Seibel), "Simulation of Social Processes and Analysis of Social Structural Data" (James S. Coleman), "Markov and Monte Carlo Models Applied to Decision Making" (Joe H. Ward, Jr.), and "Using Computers to Study Human Perception" (Bert F. Green, Jr.). Offprints of this lecture series may be obtained gratis by directing requests to: Department of Educational Psychology, Sutton Hall, University of Texas; Austin 12, Texas.

The Fort Logan Mental Health Center (Colorado) had its ground breaking ceremony February 3, 1961. In the program planned for the center, team members of all professional disciplines will offer treatment and maintain liaison with local clinics; training and research programs are also planned.

A workshop was held at Gallaudet College, February 20-24, 1961, on special problems and modern techniques in the audiological, psychological, educational, and social assessment and treatment of those with a severe hearing loss.

A conference on the use of teaching machines was held on March 1, 1961 at Teachers College, Columbia University sponsored by the Metropolitan School Study Council.

The annual Midwest Conference on Statistics for Decision was held on March 17, 1961 in Chicago, Illinois. For further information, write to: Ed Goldstein; American Trade Magazines, Inc.; 21 West Huron Street; Chicago 10, Illinois.

The topic of the third Behavioral Science Symposium at the University of Virginia on April 3-4, 1961 was "Language and Behavior." For further information, write to: Frances Taylor, Secretary; Division of Behavioral Science, University of Virginia School of Medicine; Charlottesville, Virginia.

The American Association for Cleft Palate Rehabilitation will hold its nineteenth Annual Convention on May 4-6, 1961 in Montreal, Canada.

A conference on Fundamentals of Psychology:

The Psychology of the Self will be held in New York City on May 11-12, 1961; for further information, write to: Executive Director, New York Academy of Sciences; 2 East 63 Street; New York 21, New York.

The Institute for Occupational Research (104 Webster Avenue; Manhasset, New York) is sponsoring two seminars, June 12-14, 14-16, 1961 on *Recruiting College Graduates* and on *How to Interview*.

The Merrill-Palmer Institute is offering a workshop, July 10-12, 1961, on "*The Role of the Professional Person in the Racially Changing Neighborhood*"; for further information, write to: Richard K. Kerckhoff; Merrill-Palmer Institute; 71 East Ferry Avenue; Detroit 2, Michigan.

The 1961 workshop in the Rorschach technique of personality diagnosis and other projective techniques as used with children, sponsored by the Claremont Graduate School and the Los Angeles Children's Hospital, will be held in Pacific Grove, California, on September 3-15 under the direction of Bruno Klopfer and Helmut Würsten; for applications, write to: Bruno Klopfer; P. O. Box 2971; Carmel, California.

The International Symposium on the Transmission and Processing of Information (see page 640 of the September 1960 issue), scheduled for September 6-8, 1961, has been cancelled.

Andjelko Krković, of the University of Zagreb, Yugoslavia, is spending a year as a postdoctoral research fellow in the Bioelectrical Research Laboratory, Department of Psychology, Lehigh University.

On January 11-12, 1961, a conference devoted to the Holtzman Inkblot Test, organized by the Psychometrical Laboratory of the Polish Academy of Sciences, took place in the Psychological Laboratory of the State Hospital for Mentally Ill in Krakow Kobierzyn, Poland. The nature of the test and various problems relating to administering and scoring were discussed, and some research plans were presented. Participating in the conference, headed by Mieczyslaw Choynowski, were psychologists representing several universities, research institutions, and mental clinics.

Convention Calendar

American Psychological Association: August 31-September 6, 1961; New York, New York

For information, write to:

Janice P. Fish
American Psychological Association
1333 Sixteenth Street, N.W.
Washington 6, D. C.

Rocky Mountain Psychological Association: May 11-13, 1961; Albuquerque, New Mexico

For information, write to:

Wilbur C. Miller
Department of Psychology
University of Denver
Denver 10, Colorado

Southeastern Psychological Association: April 13-15, 1961; Gatlinburg, Tennessee

For information, write to:

Susan W. Gray
Box 30
George Peabody College for Teachers
Nashville 5, Tennessee

Western Psychological Association: June 15-17, 1961; Seattle, Washington

For information, write to:

George Horton
Department of Psychology
University of Washington
Seattle 5, Washington

Midwestern Psychological Association: May 4-6, 1961; Chicago, Illinois

For information, write to:

I. E. Farber, Secretary-Treasurer
Midwestern Psychological Association
Department of Psychology
State University of Iowa
Iowa City, Iowa

World Federation for Mental Health: August 30-September 6, 1961; Paris, France

For information, write to:

Secretary-General
World Federation for Mental Health
19 Manchester Street
London, W.1, England

CALL FOR VOLUNTEERS

ANNUAL CONVENTION: AMERICAN PSYCHOLOGICAL ASSOCIATION

New York City, August 31–September 6, 1961

It takes people—preferably people with psychological background—to run a convention. Would you be willing to help? If you are planning to come to the convention and can devote at least two periods (mornings, afternoons, evenings) to one of the many jobs that must be filled to run a smooth convention, would you please indicate the periods you would be available. If you are not an APA member or in the Student Journal Group or Psi Chi, the \$3.00 Registration Fee for nonmembers will be waived, as a small token of our appreciation. At the convention you will receive a program guide, and your lapel badge will admit you to all sessions.

1. I volunteer for a maximum of periods from the ones indicated below.

2. Place the number 1 in each of your two (or more) first-choice times, the number 2 in each of your second-choice times, and the number 3 in each third-choice time. If you are concerned about avoiding time conflicts with programs of interest, consult the convention schedule in the December *American Psychologist* or the official program in the July *American Psychologist*.

	Wed. Aug. 30 Pre- convention	Thurs. Aug. 31	Fri. Sept. 1	Sat. Sept. 2	Sun. Sept. 3	Mon. Sept. 4 Labor Day	Tues. Sept. 5	Wed. Sept. 6
8:45–12:45								
12:45– 4:45								
4:45– 8:15								

Note: There *will* be mealtime breaks for those who serve successive periods on the same day.

3. If you volunteered for a morning session, could you begin at 8:15 A.M. if necessary? Yes ☐ No ☐

4. Check the services you offer:

..... General (clerical, filing, information desk, etc.)

..... Typing (Fair Good)

Name: Phone No.: Date:

Mail Address: City: Zone: State:
(on August 20)

School (if a student now) VA trainee

VA installation.....

Position (if *not* a student): Organization:

5. Please detach and mail top-part to: Bernard N. Kalinkowitz; New York University; 21 Washington Place; New York 3, New York.

6. Unless you hear otherwise from us, please come to the Volunteer Workers Desk at your earliest first-choice time (Commodore Hotel, Ballroom Floor, Parlor E); if possible, come in earlier and get acquainted. *If a change occurs in your address or availability, please write to Kalinkowitz (at the above address). Fill out, detach, and save this duplicate slip.*

	Wed. Aug. 30 Pre- convention	Thurs. Aug. 31	Fri. Sept. 1	Sat. Sept. 2	Sun. Sept. 3	Mon. Sept. 4 Labor Day	Tues. Sept. 5	Wed. Sept. 6
8:45–12:45								
12:45– 4:45								
4:45– 8:15								

ADVANCED REGISTRATION FORM
SIXTY-NINTH ANNUAL CONVENTION OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

New York City, August 31-September 6, 1961

Type or print the information requested, putting only one letter on each short line.

Circle One: Prof. _____
Dr. _____
Mr. _____ Name: _____
Mrs. _____ First Name _____ Last Name only _____
Miss _____ or Initials _____

Professional Affiliation:

(to appear on badge--print
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line. Leave an empty short
line between each word.)

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(City)

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This information is requested for the Convention Directory and will be posted during the convention:

Expected date of arrival: Date of departure:

APA membership status: No registration fee is required for those in this group.

Fellow Member Associate

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Indicate Division memberships by number(s)

Nonmember REGISTRATION FROM NONMEMBERS MUST BE ACCOMPANIED BY A REGISTRATION FEE OF \$3.00.

PLEASE MAKE CHECKS PAYABLE TO: APA CONVENTION AFFAIRS BOARD

Members and nonmembers may complete their registration at the Biltmore, Commodore, or Roosevelt Hotels. Complete registration facilities will be maintained at each hotel throughout the convention.

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..... I do not want a hotel reservation

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Sex

Address

City

State

Reservations will not be held beyond 6:00 P.M. except by request.

NOTE: THESE RATES ARE GUARANTEED AT THE RATE REQUESTED ONLY IF THE REGISTRATION BLANK IS RETURNED PRIOR TO AUGUST 1, 1961. AFTER AUGUST 1 EVERY EFFORT WILL BE MADE TO ASSIGN ROOMS AT THESE RATES, BUT SUCH ASSIGNMENT IS UNLIKELY AND CANNOT BE GUARANTEED.

MEMBERS ARE URGED TO RETURN THIS FORM PROMPTLY, AND IN ANY EVENT PRIOR TO AUGUST 1, IN ORDER TO BE SURE OF RECEIVING THE ACCOMMODATIONS DESIRED.

Your hotel reservation will be confirmed and will be mailed to you with your convention badge. Please be sure the mailing address above is correct.

Please return this form as early as possible to:

APA Housing Bureau, Pershing Square, 90 East 42 Street, New York 17, New York

(Copies of this form may be obtained from the APA Central Office)

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Report of the Conference on Graduate Education in Psychology, sponsored by the Education and Training Board of the American Psychological Association and supported by a grant from the National Institute of Mental Health, U. S. Public Health Service; held at Miami Beach, Florida, November 29 to December 7, 1958

Prepared by the Editorial Committee:

Anne Roe, *Chairman*,

and

John W. Gustad, Bruce V. Moore,
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Academic Training: Degree	University	Year
Describe pertinent work history:		
Number of papers presented or published:		

Type of position desired:

Expected salary (optional): Preferred location:

Give a tentative schedule of the time you plan to be available in the Convention Placement Office for interviews:

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Under which field of specialization do you wish your application to be filed? Check no more than two boxes:

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Journal of Applied Psychology. Applications of psychology to business and industry. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 45. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

Journal of Comparative and Physiological Psychology. Original contributions in the field of comparative and physiological psychology. Bimonthly. The issues appear in February, April, June, August, October, and December. The 1961 volume is Vol. 54. Subscription: \$10.00 (Foreign \$10.50). Single copy \$2.00.

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